CAN SOCIAL DISORGANIZATION AND SOCIAL CAPITAL FACTORS HELP EXPLAIN THE INCIDENCES OF PROPERTY CRIMES IN TURKEY?

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Organized crime and terrorism taking place in the Turkish provinces get more attention in the public agenda than other type of crimes. Although property crimes receive less attention, they pose a serious threat to public order and the social welfare of Turkish society. Academic researchers have also paid little attention to the analysis of property crimes at the macro level in Turkey. For these reasons, this study focused on the analysis of property crimes for three years period, 2005, 2006 and 2007 in Turkey, using a conceptual model of social disorganization. Provincial level data from Turkish governmental agencies were used. The findings of multivariate analyses showed that social disorganization approach, as measured in this study, provided a partial explanation of property crime rates in Turkey. Family disruption and urbanization had significant effects on property crime rate, while remaining exogenous elements of social disorganization (i.e., SES, population heterogeneity and residential mobility) did not have any expected effects. In mediation analysis, using faith-based engagement and political participation rates as mediators between the structural factors of social disorganization and property crime rate provided marginal support for the theory. Political participation rate partially mediated the relationship between property crime rate and urbanization rate, while faith-based engagement rate did not mediate the effects of social disorganization variables on property crime rate. These findings were consistent with the findings of research that has been completed in other nations, and made a unique contribution to the Turkish research on crime.

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CHAPTER I

INTRODUCTION

Statement of Problem

In Turkey, crime rates have been gradually increasing in the provinces since 2004. Primary reason was a sharp rise in the number of criminal incidents, but recent developments in criminal justice system have also played a role. The improvement of recording and measurement of the crimes helped show the increase in the number of crimes (Bahar & Fert, 2008).

Organized crime and terrorism taking place in the provinces get more attention in the Turkish public agenda than other types of crimes. Property crimes received less attention but pose a serious threat to public order and the social welfare of society. Accordingly, property crimes known to police comprised 56% of all public order crimes between the years 2000 and 2006 in the provinces of Turkey. Violent crimes constituted the rest of public order crimes (44%) for the same period. It is highly significant that property crimes gradually increased across these years in the provincial areas. The number of property crimes has grown four times during the period between 2000 and 2006 (Altay, 2007).

Concern about recent dramatic increases in property crimes must go beyond just considering it a problem for public agencies; it needs to be taken into consideration in academia. Academic researchers have paid little attention to property crimes at the macro level in Turkey. Descriptive studies are the most prominent in delineating this type of crime in Turkish literature (Aslan, 2008; Bahar & Fert, 2008). Many studies lack theoretical framework. Available explanatory studies typically focus on the variables of

social structure related to crimes without testing any theoretical framework. A few studies use models from the field of economics to explain crime (Comertler & Kar, 2007; Pazarlıoğlu & Turgutlu, 2007). Other studies use thematic maps to show the dispersion of crime across the provinces (Fert, 2007; Günal & Şahinalp, 2009). What is lacking is a macro study that simultaneously evaluates overall trend of property crimes across the provinces in Turkey, and tests a theoretical framework to help explain property crimes in Turkey.

For that reason, this study paid attention to the analysis and understanding of property crimes in Turkey by adopting an analytical approach based on social disorganization theory. The most accurate crime rates available for the years 2005, 2006 and 2007 were used. Finally, the impact of social disorganization on the variation of property crimes across the provinces in Turkey was explored.

Purpose of Study

Primary goal of this study was to analyze the explanatory power of social disorganization theory for property crimes committed in the provincial centres and districts of Turkey. A replicated version of Sampson and Grove's (1989) conceptual model of social disorganization was tested. A second purpose was to investigate the relevance of social capital in the explanation of property crimes in Turkey. A third purpose was to explore the mediation role of social capital between social structure factors and property crimes. Finally, this study provided an analysis of property crimes across the provinces in Turkey by using a comprehensive theoretical framework.

Significance of Study

The procedures and findings of this study made several contributions to the literature. Previous studies in Turkey, basically, analyzed property crimes with only one or a few elements of social disorganization such as unemployment, poverty, migration, socio-economic status (SES), and urban population density. In contrast, this research applied social disorganization theory including all essential indicators such as family disruption, residential mobility, SES, population heterogeneity, and urbanization in the explanation of property crimes. The explanatory power of social disorganization theory on property crimes in a different cultural setting was tested for the first time.

To explain the heterogeneity of crime across space and time, many social and economic factors were used in previous studies (Akcomak & Weel, 2008). However, only a number of studies analyzed the relationship between levels of social capital and crime rates (Rosenfeld, Messner & Baumer, 2001). Therefore, varying levels of social capital was used in an attempt to explain observed variation in property crime rates across the provinces in Turkey.

In extant body of knowledge, little was known about the impact of social capital on the relationship between social disorganization and property crimes in Turkey. However, previous studies in the United States (U.S.) found that collective efficacy (as a form of social capital) played a mediation role between the community structural characteristics and crime incidents (Feinberg, Browning & Dietz, 2005; Morenoff, Sampson & Raudenbush, 2001; Sampson, Morenoff & Earls, 1999; Sampson, Raudenbush & Earls, 1997). For that reason, social capital framework was inserted into assessment of the relationship between social disorganization and property crimes in

this study. Adapted from Putnam's social capital framework (2000), social capital was conceptualized with political participation and faith-based engagement. Furthermore, these concepts were employed in the full model developed in an attempt to understand possible determinants of property crimes. Finally, social capital was also used as a mediator between characteristics of social structure and property crimes.

Research Questions and Hypotheses

In the exploration of the relationship between structural factors of social disorganization and property crimes, the relationship between social capital and property crimes, and the mediation effect of social capital on the relationship between social disorganization variables and property crimes, this research tested the following hypotheses in line with the proposed theoretical model in Figure 1:

Q.1. To what extent social disorganization variables are related to the variation of property crimes across the provinces in Turkey?

H1. Socio-economic status (SES) is negatively related to property crimes.

H2. Family disruption is positively related to property crimes.

H3. Residential mobility is positively related to property crimes.

H4. Urbanization is positively related to property crimes.

H5. Population heterogeneity is positively related to property crimes.

Q.2. Can social capital really exert any influence on the incidences of property crimes across the provinces in Turkey?

H6. Political participation is negatively related to property crimes.

H7. Faith-based engagement is negatively related to property crimes.

Q.3. How do the indicators of social disorganization affect the levels of social capital across the provinces in Turkey?

H8. Socio-economic status (SES) is positively related to political participation.

H9. Family disruption is negatively related to political participation.

H10. Residential mobility is negatively related to political participation.

H11. Urbanization is negatively related to political participation.

H12. Population heterogeneity is negatively related to political participation.

H13. Socio-economic status (SES) is positively related to faith-based engagement.

H14. Family disruption is negatively related to faith-based engagement.

H15. Residential mobility is negatively related to faith-based engagement.

H16. Urbanization is negatively related to faith-based engagement.

H17. Population heterogeneity is negatively related to faith-based engagement.

Q.4. In what way might a province's social capital mediate the effects of social disorganization on property crimes across the provinces in Turkey?

H18. Political participation partially mediates the relationship between family disruption and property crimes.

H19. Political participation partially mediates the relationship between residential mobility and property crimes.

H20. Political participation partially mediates the relationship between urbanization and property crimes.

H21. Political participation partially mediates the relationship between SES and property crimes.

H22. Political participation partially mediates the relationship between population

heterogeneity and property crimes.

H23. Faith-based engagement partially mediates the relationship between family disruption and property crimes.

H24. Faith-based engagement partially mediates the relationship between residential mobility and property crimes.

H25. Faith-based engagement partially mediates the relationship between urbanization and property crimes.

H26. Faith-based engagement partially mediates the relationship between SES and property crimes.

H27. Faith-based engagement partially mediates the relationship between population heterogeneity and property crimes.

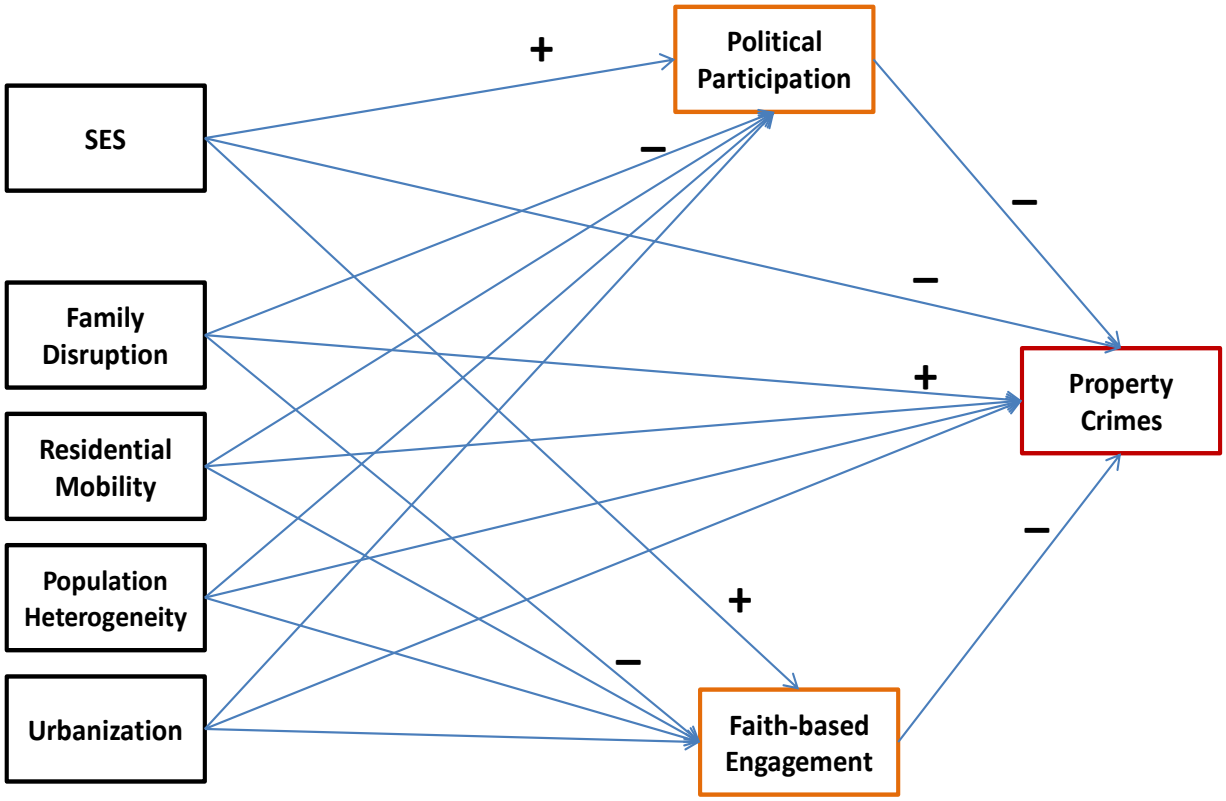


Figure 1. A path diagram for the hypothesized relationships among the variables.

CHAPTER II

THEORETICAL FRAMEWORK

First Interpretations of Social Disorganization

Social disorganization perspective emerged during 1900s as a systematic way of studying social problems resulting from failure of social rules essentially coordinating parts of society and interaction among them. Contributing to the sociology literature with their original ideas, Charles H. Cooley, W. I. Thomas and Florian Znaniecki, and William F. Ogburn profoundly influenced the writings of social disorganization theorists. Viewing society as a complex and dynamic system, these researchers examined the impact of cultural, demographic and technological changes on equilibrium of social system. According to their observations, cultural conflict and breakdown of social control in communities are the root causes for social disorganization (Rubington & Weinberg, 2010, pp. 52-55).

In *The Polish Peasant in Europe and America*, Thomas and Znaniecki (1927) discussed the social problems resulting from Polish immigration to the U.S. According to authors, Polish immigrants have difficulties in adopting new rules and establishing social control in their unique community (as cited in Rubington & Weinberg, 2010). Moreover, immigrants severely experience cultural conflict and dissolution of family structures. Therefore, the immigrant community is infected by criminality and delinquency as well as alcoholism and mental problems. In the case of Polish immigration, social disorganization stems from community's inability to adapt to new conditions and to control the members of immigrant society (as cited in Rubington & Weinberg, 2010, pp. 53-55). Therefore, considering Polish immigration, Thomas and Znaniecki (1927)

defined social disorganization as “the breakdown of the influence of rules on the individual” (as cited in Rubington & Weinberg, 2010, p. 53).

In a similar manner, in *The City*, Robert Park (1924) related social disorganization to social change. For Park, any form of change alters the routine of social life, thereby breaking up the habits, traditions and customs that are the basis of social organization. Urbanization, industrialization and immigration especially disrupt social norms and values on the community as well as decreasing the informal control of social system. Therefore, all alterations experienced in modern society also leads to social disorganization (as cited in Rubington & Weinberg, 2010, pp. 57-58).

In *The City*, Park and Burgess (1924) established a relationship between ecology and disorganization in the community. According to them, people living in certain areas of the city have similar socio-demographic characteristics. Moreover, social problems such as disrupted families, poverty, and criminality are observed only in disorganized and industrialized parts of the cities. Hence, disorganization is limited to certain areas of the cities (as cited in Rubington & Weinberg, 2010, p. 61).

Park and Burgess (1924) used the city of Chicago as a social laboratory and divided the city into concentric zones. According to system of concentric zones developed by Park and Burgess (1924), the city of Chicago comprises of five concentric zones that have different characteristics. Zone 1, the centre of the concentric zones, is occupied by businesses, light industry and entertainment places. Residents of the central zone are homeless and transient people residing in the hotels. Zone 2 is called as “zone in transition” in the sense that industrial areas enlarge toward this zone. This zone is characterized with deteriorated residential buildings, and their residents that are

unskilled laborers and foreign immigrants. Buildings in this area are not kept in proper condition with the expectation that they will be sold for factories. However, land values are quite high as the area is very close to businesses and factories in Zone 1. Zone 2 covers the most disorganized areas labeled with poverty, family disruption, unstable and heterogeneous population. Zone 3 is mainly occupied by working class people, which is more stable than Zone 1 and Zone 2. This zone is a bridge between the slum and residential areas. Zone 4 and Zone 5 are the residential areas for upper-middle classes. All accommodations in these zones are described as stable and long time residential areas. Therefore, social disorganization is rarely observed in these areas (as cited in Rubington & Weinberg, 2010, p. 61).

In *Human Communities*, Park (1952) also stated that territorial zones are labeled by the social conditions of their residents in the metropolitan community. Yet, the population is not stable in concentric zones (Park, 1952, pp. 144-155). During the course of time, especially the immigrants move toward the suburbs and more stable areas (Park, 1952, pp. 221-225). Population flows move from inner zones toward outer zones in the city. The new population flows force previous residents to leave their places for the closest outer zone (as cited in Rubington & Weinberg, 2010, p.63). In that, the previous immigrants escape from criminality, poor public schools, and deteriorated housing. Therefore, these suburban neighborhoods in outer zones are also known as crime-free areas (as cited in Rubington & Weinberg, 2010, p. 79).

Theorization and Emergence of the Social Disorganization Theory

Clifford R. Shaw and Henry D. McKay have contributed much to the development of social disorganization theory (Rubington & Weinberg, 2010). In *Juvenile Delinquency and Urban Areas* (1942), Shaw and McKay focused on juvenile delinquency in certain areas of Chicago that have deteriorated socio-economic and cultural characteristics. Observing the city of Chicago for three different periods between 1900 and 1933, they discover the causes of increasing crime rates in inner city (p. 102). Accordingly, higher rates of delinquency in inner parts of the city are related with the social life in those areas. Moreover, delinquency and crimes are observed in some neighborhoods with certain structural characteristics. These structural characteristics are residential instability, population heterogeneity and low economic status. In that sense, the zones with these characteristics are deprived of social organization and these zones suffer from delinquency (p. 61).

Furthermore, Shaw and McKay (1942) analyzed structural characteristics of the communities and delinquent acts in relation to low socioeconomic status of residents, physical environment in neighborhoods and population characteristics. Shaw and McKay (1942) revealed that delinquency cases are observed in areas characterized with scarce population, poor families, foreign-born residents, high residential mobility, lower rental costs, low economic status, and migrants (pp. 51-52). Their findings also show that higher rates of delinquency are persistent in disorganized areas of the city regardless of population mobility. Additionally, it is notable that delinquency and criminality are consistent across generations residing in deteriorated areas of the city. The causes of crime are significantly related to the changes in the structural

characteristics of the community and the growth of the city.

Based on the findings of their study, Shaw and McKay (1942) formulated a theory based on three elements of structural disorganization in the community, which are low economic status, residential mobility and ethnic heterogeneity. Low economic status of the families and the community at large prevent formation of local agencies and institutions. Due to the deteriorated conditions of the inner concentric zones, majority of the residents migrate to the outer affluent zones at the first possible opportunity (pp. 137-139). Mobility creates institutional instability, which is a hindrance to the discovery of common interests. Therefore, the migrant communities could not unify around common values and interests due to lack of stable community institutions. Similarly, ethnic heterogeneity leads to isolation of migrant residents from each other, as there are no common values and norms providing social cohesion and solidarity among them. As a result, the poor migrant communities lack all socio-economic resources to share a common goal, and hence the communities fail to establish a local organization to pursue their own interests and values (pp. 177-180). Without local organizations, the communities also loose the chance of connecting to other communities and cannot control themselves to prevent delinquent acts of their residents.

Finally, Shaw and McKay (1942) focused on how deteriorated neighborhood conditions and weak community organization facilitate higher levels of delinquency in the community, and underlined that due to lack of effective informal control mechanisms and functional local organizations, structural disorganization emerges in migrant communities of Chicago. Shaw and McKay (1942) proved that urban ecology is

substantial determinant of social events that lead to crime and delinquency in the urban communities.

Reformulation and New Directions in the Social Disorganization Theory

Sampson and Groves (1989) argued that ecological studies analyzing the relationship between racial structure income, mobility and crime are inadequate in understanding the concept of social disorganization. Therefore, they considered "exogenous structural factors and mediating dimensions of social disorganization" (p. 777) together in explanation of the variation of crime rates in a community. In this vein, in addition to residential mobility, ethnic heterogeneity, low economic status, urbanization and family disruption are also significant structural characteristics that may decrease the level of informal social control and weaken social organization in local communities.

Moreover, for Sampson and Groves (1989), loose local friendship networks, lower levels of organizational participation and uncontrolled teenage peer groups in streets are also mediating factors between structural indicators of social disorganization and crime in a community. These dimensions of disorganization also indicate the absence of social control. Furthermore, communities with lower levels of social control are more exposed to higher levels of crime and delinquency. Therefore, Sampson and Groves (1989) stressed the importance of informal social control, which is sustained by the internal dynamics of a community and define social disorganization as the failure of a community in sustaining common values, and in maintaining effective social controls in the community. In short, their study reveals that social disorganization theory is still applicable and relevant for explaining crime and delinquency in relation to social

structure of a community.

Kubrin and Weitzer (2003) evaluated the development and current situation of social disorganization theory, and proposed that social disorganization theory should also include culture and formal social control as well as characteristics of urban political economy (pp. 374-375). For them, neighborhoods are not as homogenized as depicted in previous literature. In the same neighborhood, residents significantly differ from each other either adapting conventional norms or embracing local cultural codes. In that sense, structural factors along with subcultural and normative responses determine the propensity to delinquency and crime. Hence, Kubrin and Weitzer (2003) proposed that cultural factors might be taken into account in social disorganization theory (p. 380).

Moreover, although social control is largely discussed in many studies, formal social control is a missing part of this theory. For Kubrin and Weitzer, formal control is functional in both directly alleviating crime and disorder, and influencing informal control capacity of the residents in a neighborhood (p. 382). Without formal control mechanisms, when community action is needed, intervention of community members will not take place due to reluctance or fear of victimization. Formal control through policing is also of great importance in terms of maintaining social control and confidence in law and state as well as deterring future criminals. Therefore, Kubrin and Weitzer suggested that theoretical importance of formal social controls be considered in further studies. In that, they discovered that no study tested the relationship between formal and informal social control (pp. 383-384).

Depending on recent studies, Kubrin and Weitzer (2003) finally claimed that urban reorganization indirectly affects neighborhood crimes. Deindustrialization of cities,

emergence of jobless people in cities, and generally economic deprivation, lead to growth of illegal markets and criminality in neighborhoods. In that sense, Kubrin and Weitzer suggested that urban political and economic forces be given enough attention in order to understand the macro-micro level effects on neighborhoods (p. 387).

Review of the Social Disorganization Theory

Thomas and Znaniecki (1918) first introduced the concept of social disorganization to the sociology literature (Rubington & Weinberg, 2010). Later, the leading figure of Chicago school, Robert E. Park (1924) added that social disorganization is resulted from breakdown of social control due to social change. In systemic concentric zone model, Park and Burgess (1924) proposed that social disorganization is final product of industrialization, migration flows, neighborhood deterioration and lack of social control (Rubington & Weinberg, 2010).

Taking this one-step further, Shaw and McKay (1942) theorized based on the findings of their long-term study that structural factors such as ethnic heterogeneity, low economic status and residential stability have certain effects on social organization of local communities. The scholars relate delinquency and crime to the developments in the ecology of city. Finally, Sampson and Groves (1989) tested Shaw and McKay's social disorganization theory including new structural factors, family disruption and urbanization. Their new model use community characteristics such as unsupervised youth groups, lower levels of local friendships and local organizational participation as mediating factors between structural elements of social disorganization and delinquency and crime. As a result, Sampson and Groves (1989) found enough evidence for social disorganization to become a viable theory.

Social Capital and Its Various Interpretations

Many social scientists have widely described and discussed social capital in extant literature. However, it is widely agreed on that this concept was popularized by Bourdieu in 1985 (Portes, 1998) and Coleman in 1988 (Portes, 1998; Berger & Murphy, 2000) and Putnam in 1993 (Portes, 1998).

Bourdieu explained social capital as aggregates of resources related to permanent or transitory social networks (Portes, 1998). For Bourdieu, social capital is instrumental for individuals in the sense that they participate in social networks for building the network as well as pursuing their interest in return to their endeavors in the creation of the network. Bourdieu's social capital has two dimensions: First, individuals access resources through their relationships, and second, the quality of resources. Therefore, utility provided by social capital to the members of social network is also basis of social network (Portes, 1998).

In *Social Economics*, Becker and Murphy (2000) focused on the function of social capital rather than its various meanings in literature, and they stated that social capital shapes individual behaviors positively or negatively in each layer of social structure. Moreover, individuals are also endowed with the selection of social capital. In the selection of social capital, utility maximization is determinant of individual choices in a specific society. In line with this, selection of neighborhood, school, occupation, marriage and friends are products of rational decision process. For them, selection of living in a wealthier neighborhood is as rational as the selection of establishing associations with criminals (p. 23). In the selection, individuals are greatly influenced by social environment in which they lived. Including family, in every social cluster,

individuals are under the influence of spillover effect of social capital. Furthermore, Berger and Murphy (2000) also underlined the importance of informal social control maintained by social capital. As a result, better families, neighborhood and occupation provide better opportunities to its members. Contrarily, neighborhoods with lower social capital will produce unpleasant living environment (p. 48). In fact, each selection process contributes to different types of social capital and determines the future choices of next generations as well.

Similar to Becker and Murphy (2000), Coleman defined social capital by its function (1988, p. 98; Portes, 1998). Adopting from the field of economics, Coleman used principle of rational action in the analysis of social systems, mainly the analysis of social capital and its usefulness (1998, p. 97). For Coleman, social capital depicts one aspect of social system and enables individual actions within that social system. Unlike other forms of capital such as economic and human capital mentioned by Bourdieu (1985) and Becker (1962), social capital exists in the network of relations between actors and organizations (1998, p. 98). It is not lodged in persons or in physical entities. While human capital is created by investing in persons through enhancements of their skills and abilities (Becker, 1962, p. 9), social capital emerges through building of relations among persons, which promotes the ability to act for the utility of all individuals (Coleman, 1988, p. 100). As an example, social trust and norms are different forms of social capital facilitating certain actions of individuals as well as constraining deviant actions in the community (pp. 102-105). Besides, as different sources of social capital, social networks and voluntary organizations are functional in increasing the quality of life by providing a wide range of utilities for their members (p. 108).

As noted in discussion above, Bourdieu (1985), Becker (1962, 2000) and Coleman (1988) concluded that social capital exists in the relationships among individuals, organizations as well as between individuals and organizations. The function of social capital within these networks is to create a utility for participating actors. In contrast to this approach, Putnam (1993) defined social capital as social networks, social trust, and social norms as general features of social organizations. He also shared that social capital facilitates action and cooperation for mutual benefits of all related parties. For him, social capital enhances the investment into both physical and human capital (1993, pp. 35-36).

Moreover, in *Bowling Alone*, Putnam (2000) used social capital for all types of community efforts, and proposed multidimensional nature of social capital in the explanation of social problems. According to Putnam, two main types of social capital are of great importance: trust and social participation. In that, these types of social capital function as a binding mechanism among social order mechanisms in the community. Social participation is also available in different forms: political (party membership, voting, participation to rallies and riots), civic (associational membership, clubs), religious (church attendance or membership) and other informal social ties. Moreover, Putnam (2000) stressed that decline in social capital would result in the emergence of crime or any increase in the crime rates. He directly relates crimes rates to inadequacy of social capital in the society. Putnam (2000) concluded that social networks, as the basis of social capital, strengthen the communal ties, and sustains social order (pp. 308-318).

In the same manner, Sampson, Raudenbush and Earls (1997) introduced the

notion of collective efficacy. According to Sampson et al. (1997), the term ‘collective efficacy’ refers to cohesion of the community for the benefit of all community (similar to the idea proposed by Bourdieu, Berger & Coleman). The researchers stress the importance of informal social control, which completely depends on the abilities of community. These abilities are interpreted as collective efficacy, which may be deemed as a form of social capital. In that sense, this type of social capital functions as an informal social control mechanism that enhance the community’s ability to achieve desired goals and reach common values. More clearly, Sampson and Raudenbush (1999) explained that collective efficacy is the informal ties among residents in a neighborhood that enable residents to respond to delinquency and crime with a collective conscious (p. 603). Hence, attachment to the community and collective action are prerequisites of collective efficacy.

Relevance of Theoretical Structure

As a macro level theory, social disorganization has become a major tool in the explanation of crimes in neighborhoods, communities, cities and nations. It draws attention to deterioration of social structure, and breakdown of social ties and group solidarity that may lead to deviance and criminal events. In that, structural elements in a society are closely linked to social organization as well as emergence of deviant acts and crimes (Howard, Newman & Pridemore, 2000).

Similarly, Sampson and Groves (1989) claimed that this theoretical framework combines external (ethnic heterogeneity, low SES, family disruption, residential mobility and urbanization) and internal structural factors (local networks, organizational participation and teenage groups) leading a community to both social organization and

disorganization. Therefore, social disorganization framework is one of the most appropriate approaches that enable the researchers to use structural factors, in other words, macro level facts, in the explanation of spatial patterns of crime.

With its more structured framework, social disorganization theory appears to be an applicable theory for explanation of urban level facts. Abrupt changes in social structure such as political and economic shifts may have certain impact on social integration and cohesion in the community as well as in a certain geographical area. Therefore, this theory is also applicable higher levels of unit of analysis such as countrywide or cross-national (Howard, Newman & Pridemore, 2000). In a supportive manner, in their analysis of macro level theories of crime, Pratt and Cullen (2005) found that among other macro-level theories (social support/altruism, rational choice/deterrence, routine activity, anomie/strain, subcultural) social disorganization theory has received a strong empirical support across the quantitative criminological research conducted between 1960 and 1999.

Moreover, social disorganization indicators in theoretical model are easily measurable and therefore, production of a measurement model is quite simple. Availability of data on social disorganization concepts is also an important element that makes this theoretical framework viable for even cross-national studies (Howard, Newman & Pridemore, 2000). Rationale for this study is also based on availability of data on social disorganization for the researcher.

Finally, many contemporary researchers have adopted this approach in the examination of correlates of urban crimes (Bursik, 1988; Sampson & Groves, 1989; Veysey & Messner, 1999). In that sense, social disorganization framework has become

functional in the explanation of ecological facts. Although validity of macro-level theories is still questioned by some researchers (Pratt & Cullen, 2005), social disorganization theory appears to be the most applicable approach for many researchers to analyze urban ecology and urban crimes (Lowenkamp, Cullen & Pratt, 2003; Sampson & Groves, 1989; Veysey & Messner, 1999).

CHAPTER III

LITERATURE REVIEW

Social Disorganization

Based on available literature, it is quite apparent that social disorganization theory has evolved and developed during the last century. Many researchers have contributed to the formation of this macro theory (Rubington & Weinberg, 2010). Recent efforts also included intervening dimensions into social disorganization framework (Barnett & Mencken, 2002; Lowenkamp, Cullen & Pratt, 2003; Osgood & Chambers, 2000; Sampson & Groves, 1989; Sun, Triplet & Gainey, 2004; Veysey & Messner, 1999). With its more structured framework, social disorganization theory appears to be an applicable theory for future studies focusing on the explanation of crimes.

Sampson and Groves (1989) reformulated and directly tested Shaw and McKay's theory of social disorganization for a different cultural setting by using British Crime Survey (BCS) of 1982. Their findings showed that all exogenous structural characteristics have significant effects on the supervision of peer groups, while only two of them, residential stability and urbanization, significantly predict local friendship networks. Additionally, socioeconomic status is the only predictor of organizational participation. In this regard, Sampson and Groves (1989) found a relatively strong support for the relationship between exogenous structural characteristics and intervening dimensions of social disorganization.

Similarly, the scholars discovered that apart from residential stability, all other structural characteristics have a positive significant effect on burglary. Auto theft is only predicted by socioeconomic status, residential stability and family disruption, and

vandalism is predicted by residential stability and socioeconomic status. As to criminal offending, family disruption is the strongest predictor of property offending, while other structural characteristics do not exert any significant direct effect on offending rates. Again, family disruption is consistently a significant predictor of both personal violence and total victimization. Similarly, urbanization has a significant effect on both robbery and total victimization. Additionally, Sampson and Groves (1989) also analyzed indirect and total effects of exogenous structural characteristics on total victimization rates through intervening dimensions of social disorganization. Contrary to the increasing total effect of other structural variables, they found that residential mobility alone does not exert any indirect effect on total victimization. In general, their findings provided enough support for social disorganization theory in the sense that structural characteristics of the community have certain effects on the variation of criminal victimization and offending rates across British neighborhoods. Their findings also proved that the effects of structural characteristics of the communities on crime and delinquency are significantly intervened by different dimensions of social disorganization.

Veysey and Messner (1999) used British Crime Survey (1982) to retest the theoretical model proposed by Sampson and Groves (1989) with a different statistical method and software (LISREL). Analyzing total victimization in British communities, they found partial support for the mediating effects of three dimensions of social disorganization, which are unsupervised peer groups, local participation and friendship networks. Among these dimensions, unsupervised peer groups has the strongest direct effect on total victimization of crime, while the other two dimensions have moderate

direct effects on it. As to the structural characteristics of social disorganization, family disruption and urbanization have stronger direct effect on total victimization of crime. Surprisingly, SES, ethnic heterogeneity and residential stability do not exert any significant effect on crime rates. These findings are contradictory to that of Sampson and Groves' study. Therefore, Veysey and Messner (1999) criticized the statement that the findings of Sampson and Groves provided a strong support for the social disorganization theory. Based on their findings, Veysey and Messner (1999) contended that theoretical models analyzing crime with macro level structural variables could be further specified, as the findings in their study were not supported by conventional theory of social disorganization.

Osgood and Chambers (2000) took traditional study of social disorganization one step further by analyzing arrest rates of violence among juveniles in rural areas of four states (Florida, Georgia, Nebraska, South Carolina) in the U.S. Their findings are consistent with the previous literature in the sense that three exogenous characteristic of social disorganization, residential instability, ethnic heterogeneity and family disruption are significantly related to different forms of juvenile violence. Similarly, size of population is a significant predictor of arrest rates, that is, arrest rates decrease in areas with a small juvenile population. However, poverty rate, unemployment and proximity to urban areas do not predict arrest rates as expected. With this study, Osgood and Chambers (2000) proved that social disorganization theory is applicable and generalizable to rural communities as well as the communities in urban areas.

Similar to the study of Osgood and Chambers (2000) on non-metropolitan areas, Barnett and Mencken (2002) compared the effects of various social disorganization

factors on both property and violent crimes in non-metropolitan areas by using Uniform Crime Reports (1998-1991). Accordingly, SES measures exert effects on both crime types in different directions. Based on the analysis of interaction effects in their model, SES measures positively predict property crimes for non-metropolitan counties losing population, while negatively for the counties with a growing population. Contrary to this, SES is positively related to violent crimes in non-metropolitan areas where population growth is high. For Barnett and Mencken (2002), interaction of lower levels of SES and population loss negatively effects social organization in non-metropolitan counties, while decreasing social support for the poor and producing different social outcomes including crime. Barnett and Mencken (2002) finalized that their findings based on the interaction effects of SES measures and population loss may not be consistent with previous literature, therefore suggested that further studies use household and individual surveys to measure the indicators of social disorganization and crime.

Lowenkamp, Cullen and Pratt (2003) replicated Sampson and Groves' study by using data from British Crime Survey (1994), and tested the validity of their theoretical model and check the consistency of the results. Majority of their findings are consistent with Sampson and Groves' findings for the direct effects of structural characteristics (SES, residential stability, ethnic heterogeneity, family disruption and urbanization) on mediating dimension of social disorganization (local friendship networks, organizational participation and unsupervised peer groups). However, ethnic heterogeneity is negatively related to local friendship networks, and residential stability is positively related to organizational participation. Similarly, SES and urbanization has no significant direct effect on organizational participation, while residential stability does not exert any

significant direct effect on unsupervised peer groups. Consequently, these findings are not consistent with the original model proposed by Sampson and Groves (1989). As for the estimates of total victimization rate, Lowenkamp, Cullen and Pratt (2003) obtained that SES and residential stability have non-significant and inverse effects on total victimization rate as oppose to the findings of Sampson and Groves (1989). These results are also not consistent with the tenets of the original social disorganization theory. In general, the study of Lowenkamp, Cullen and Pratt (2003) provided support for both viability of social disorganization theory and the results from Sampson and Groves' (1989) study of British Crime Survey (1982).

Using data from 36 urban neighborhoods in the U.S, Sun, Triplet and Gainey (2004) examined assault and robbery rates in urban neighborhoods with the social disorganization model proposed by Sampson and Groves (1989). They found that all structural indicators of social disorganization are significantly related to robbery, while only two of them, residential mobility and racial heterogeneity, significantly predict assault. The researchers enlarged the theoretical path model formed by Sampson and Groves(1989) including indirect effects of residential mobility, local social ties and organizational participation on crime rates through unsupervised youths and indirect effect of family disruption on crime rates through organizational participation. Their mediation analysis yielded that apart from the effects of SES, intervening dimensions of social disorganization (local social ties, unsupervised youths, organizational participation) mediate the effects of other social structure characteristics (residential mobility, racial heterogeneity, family disruption) on both assault and robbery rates as expected. Similarly, unsupervised youths do not successfully mediate the effects of

organizational participation on both assault and robbery. However, in line with theoretical expectations, the effect of local social ties on both crime types is mediated by unsupervised youths. The results of their analysis partially support Sampson and Groves' study in the sense that intervening dimensions of social disorganization successfully mediate the effects of social structure on assault, while their intervention effect is weak on the relationship between social structure and robbery crimes.

Previous studies mentioned in this study analyze variation of crime rates across different units (e.g. communities, counties) in respect to structural characteristics of communities in both urban and rural areas. Their findings provide a relative support to traditional social disorganization approach. In this regard, this study is also designed to explore the relationship between social disorganization and crime across the provinces in Turkey.

Social Capital

Social capital has received considerable attention in many social studies. It has become a key concept in understanding of different abilities of communities as well as in finding solutions for various social problems in different communities. Social capital is also a significant indicator of how well a community is socially organized. Lower levels of social capital may also be related to disorganization in a community. Therefore, current studies have used different level of measurements and indicators of social capital in the analysis of social problems in communities (Rosenfeld, Messner & Baumer, 2001).

In *Bowling Alone*, Putnam (2000) conceptualized social capital with social trust, informal sociability, volunteerism, political, and civic engagement. In this work, Putnam

(2000) related rising level of crimes in the United States to declining social capital in American communities. In a similar vein, Rosenfeld, Messner and Baumer (2001) used electoral participation and organizational membership rates in the measurement of social trust, and look for the relationship between social trust and homicide in the US. Considering social disorganization, anomie and strain theories together, Rosenfeld, Messner and Baumer (2001) contended that social trust and civic engagement decrease crime rates by strengthening formal and informal social control. In line with this, the researchers discovered that social capital is negatively related to homicide rates.

Lederman, Loayza and Menéndez (2002) used common indicators of social capital (social trust and voluntary participation) in order to examine effect of social capital on violent crimes in 39 countries. The researchers found that higher levels of social trust among community members are related to lower levels of violent crimes. Similarly, Akcomak and Weel (2008) analyzed the heterogeneity of crimes across municipalities in Netherlands by employing a number of social capital indicators (such as voting rates, social trust, blood donations, and charity). They found that municipalities with higher levels of social capital experience less crime in Netherlands. In the same way, Galea, Karpati and Kennedy (2002) used cross-sectional data in order to analyze the relationship between homicide rates and social capital in the US. Among other social capital indicators, perceived trust has a strong negative effect on homicide rates.

Adopting from Putnam's study (2000), Buonanno, Pasini and Vanin (2006) measured social capital in Italy with political participation (referenda turnout), recreational associations, voluntary associations and blood donation. Especially, they considered referenda turnout and blood donations as safe proxies of social capital. The study showed that social capital is not related to robberies; however, it is significantly and positively related to thefts, but negatively related to car thefts.

In another study, Messner, Rosenfeld and Baumer (2004) used social trust and social activism as multiple indicators of social capital, and modeled the relationship between social capital and homicide rates in 40 geographical areas of the US. The researchers found that social capital measures have significant impact on homicide rates. It is also observed that social trust has a negative impact on homicide rates (Messner, Rosenfeld & Baumer, 2004). In a similar manner, Chamlin and Cochran (1997) operationalized social altruism with the number of charity donations, which is thought to be an indicator of social capital, and discovered that social altruism significantly and negatively predicts both violent and property crimes in U.S. cities (Chamlin & Cochran, 1997).

To sum up, social trust, social networks and informal social control are closely related to social organization in a community. Availability of these elements in a society strengthens social organization, while decreasing frequency of crime incidents (Rosenfeld, Messner & Baumer, 2001; Sampson & Raudenbush, 1999). However, depleted stocks of social capital will result in higher rates of crimes (Rosenfeld, Messner and Baumer, 2001). As articulated by Bursik (1999) and mentioned by Sampson (2006), social ties, social network and more comprehensively social capital hold a significant

role, and therefore social capital is a part of social disorganization theory. In that sense, above-mentioned conceptual framework provided this study a rationale for using social capital as a part of social disorganization model in the explanation of property crimes in Turkey.

CHAPTER IV

DATA AND METHODOLOGY

Data and Data Collection

This study investigated the impact of social disorganization and social capital on property crimes across the provinces in Turkey. This study therefore used provinces as the unit of analysis. Provinces are the highest local administrative entities established across all geographical areas of Turkey. The number of the provinces in Turkey is 81, and the number of cases is the same in this study. According to Turkish administrative structure, Turkey is divided into 81 provinces managed by the governors assigned by the central government in Ankara, the capital province of Turkey. Each province includes a province centre, districts, towns and villages.

This study employed official data recorded by Turkish Police (TNP) and two prominent public agencies (Turkish Statistical Institute and State Planning Organization). Accordingly, the number of property crimes is provided by TNP. TNP records the crimes in its jurisdiction (centers of the provinces and majority of districts). These records exclude the number of crimes committed in the areas within the jurisdiction of Gendarmerie, which is the second law enforcement force with a militarist structure. Gendarmerie mainly operates in rural areas which are rarely populated places (mostly in villages) as well as in some districts and towns determined by the governorship of the province and the Ministry of Interior.

Majority of data employed in this study are retrieved from the website of the Turkish Statistical Institute (TurkStat, 2010), which is most available official data source. Data are also accessible online and downloadable free of charge. In this regard,

majority of the variables (divorce rates, the number of people migrating in and out of the provinces, GNP per capita at the provincial level, provincial population with a graduate degree, provincial population with managerial and professional position, the number of foreign-born residents in the provinces, voting rates for the provinces, the number of young males aged between 15-29 in the provinces) were downloaded from the website of Turkish Statistical Institute. Urbanization rate and socio-economic development index score (SEDI) were obtained from the reports of State Planning Organization. Exceptionally, the number of mosques (faith-based engagement) was requested from the Presidency of Religious Affairs.

Finally, property crimes data were limited with police jurisdiction, which covers province centers and districts, while all independent variables refer to the whole province including province centre, districts, towns and villages. This was also a limitation for this study, which was discussed in Chapter VI.

Definition and Measurement of the Variables

Property Crime

Property crime is the dependent variable of the study. Property crimes fall under the main heading of public order crimes in policing literature in Turkey. Turkish Penal Code defines property crimes as the crimes committed against individual and public properties. In Turkish context, property crimes specifically refer to arson, larceny-theft, burglary, auto theft, theft from auto, pick pocketing, snatching, robbery, swindling and other unclassified similar offences. In this study, property crime is measured with the total number of offences falling under this group. Therefore, this variable has face validity, as it covers every aspect of this type of crime in Turkey. Property crimes are

recorded by Turkish Police according to related articles of Turkish Penal Code (2004). Categorization of property crimes in Turkey is more comprehensive than uniform crime reports recorded by Federal Bureau of Investigation (FBI) in the U.S. While FBI limits property crimes with arson, larceny-theft, burglary and motor vehicle theft, in Turkey, category of property crimes covers more crime types as previously stated.

In the ecological studies on crime, it is quite common that crime measures are averaged in order to minimize fluctuations over the years (Messner & Sampson, 1991; Beyerlein & Hipp, 2005). Therefore, the average number of crimes for 2005, 2006 and 2007 is used and rates for property crimes per 1000 inhabitants at the province level is calculated. As the population of several provinces in Turkey is about 80.000, crime rates are calculated per 1000 inhabitants. The formula for property crime rates is as follows: Property Crime Rate= (Average Number of Crimes for 2005-2007/Provincial Population 2000)/1000. This formula is adopted from the Bureau of Justice Statistics, the U.S. Department of Justice.

Social Disorganization Variables

Based on Sampson and Groves' (1989) expanded model of social disorganization, this study uses following five variables, socio-economic status (SES), family disruption, population heterogeneity, urbanization and residential mobility as the structural factors of social disorganization in the provinces of Turkey.

Socio-economic status (SES) has become an indispensable element of social disorganization framework. Shaw and McKay (1942) characterized poor neighborhoods with lack of wealth, inadequate resources, and social disorganization. These

communities are also not able to maintain formal and informal control, thus this facilitates delinquency in the neighborhood (as cited in Sampson & Groves, 1989). Therefore, Sampson and Groves (1989) employed SES as an exogenous element of social disorganization in their theoretical approach. Similar to their way of measurement, this study constructs a scale of three social class indicators: education, occupational status and income.

In this vein, SES variable in this study has face validity as it covers three main indicators in line with previous literature. Accordingly, education is the percentage of population with a college and graduate degree. Occupation is the percentage of population with managerial and professional positions. Previous studies have used median family income in the construction of SES index at community/neighborhood level (Bellair, 1997; Bernburg & Thorlindsson, 2007; Sampson & Groves, 1989). However, at the aggregate level, gross national product per capita has been also used as a proxy measure of income and wealth in previous literature (Buonanno, Pasini & Vanin 2006; LaFree & Tseloni, 2006; Shah, 2010). In that sense, this study uses gross national product per capita (GNP in US dollars) in the provinces as an available and valid indicator at the provincial level.

SES index is formed based on these indicators obtained from Census 2000. SES scale is obtained by summing z-scores of these three indicators (education, occupational status, and gross national product per capita in the provinces). These indicators are measured in different units (education and occupational status in percentage, and gross national product per capita in the provinces in US dollar units). Summing raw scores of these indicators leads to the domination of the value of gross

national product per capita in the provinces in total score of SES index. Therefore, these variables are converted into z-scores in order to give these indicators equal weight in SES index. By using z-scores of these indicators, a unit weighted composite measure of SES is formed (Warner, 2008). SES index is calculated by the researcher and the formula for SES index is as follows: SES index = $Z_{education} + Z_{occupational\ status} + Z_{GNP}$. This formula is adopted from Sampson and Groves (1989, p.784).

Reliability of this scale is also tested with cronbach alpha reliability. Reliability for the scale constructed by z-scores of the items is .85 (cronbach α for standardized items=.85). Nunnaly (1978) accepts .70 as a cutoff point for reliable scales (as cited in Santos, 1999). Therefore, it can be assumed that SES index has adequate reliability. Validity of SES index is also analyzed by factor analysis (Sun, Triplett& Gainey, 2004). The principal component analysis was resulted with only one component (components rotated by Varimax) with an eigenvalue value greater than 1. SES indicators explained 77 % of the total variance. Correlations between all indicators were above .70. Findings of factor analysis showed that SES index has also a content validity.

Family disruption is an exogenous element in social disorganization framework. It is one of the prominent factors leading to decrease in the level of informal social control in the community. Bloom (1966) found that participation to community organizations and educational and recreational activities is low in localities with disrupted families (as cited in Sampson, 1987). Sampson (1987) further discussed that family disruption may weaken social ties as well as social organizations which link the members each other and nourish social norms and values. Additionally, Messner and Rosenfeld (1994) also

stated that disrupted families are less effective in imposing common values and norms to their members, and therefore, family disruption decreases informal social control in community. Similarly, family disruption facilitates social disorganization decreasing levels of collective efficacy in the community (Sampson, Morenoff & Earls, 1999). In that, disrupted families are less active in intervening to the problems of the neighborhood alongside neighborhood watch, questioning strangers and supervision of the youngsters (Sampson, 1987). Therefore, family disruption has direct effects on disorganization in the community as well as on delinquent acts and emergence of crime (Sampson 1987; Sampson & Groves, 1989).

In many studies, family disruption has been measured with divorce rates (Andresen, 2009; Baller, Anselin, Messner, Deane & Hawkins, 2001; Chamlin & Cochran, 1995; Maume & Lee, 2003; Ochsen, 2010; Schoepfer & Piquero, 2006). Similarly, in this study, family disruption is measured with divorce rates at the province level. It is the number of divorced per a thousand people in the same calendar year. This study uses divorce rates calculated by TurkStat, and takes an average of divorce rates for the years 2001, 2002 and 2003 for a strong measurement of family disruption in Turkey. Divorce rates are calculated by TurkStat and the formula used by TurkStat is as follows: Divorce rate = (Number of divorces / Mid-year Provincial Population) x 1000.

Population heterogeneity is thought to be a negative element thwarting the community to organize itself (Shaw and McKay, 1942). Due to fear and lack of trust among racial or ethnic groups in the community, social ties and network remains to be undeveloped. Moreover, diversity of norms and cultural traits also impede social

integration. Therefore, social organization cannot be achievable or becomes ineffective. As an outcome of this social process, delinquency is inevitable (as cited in Sampson & Groves, 1989; Wong, 2007). Some studies have taken into account the percentage of ethnic groups in population as an indicator of heterogeneity (Cochran & Chamblin, 1994; Sampson & Groves, 1989). Some others have used the percentage of foreign-born residents in a country (Karakus, 2008; Ochsen, 2010; Sampson, Raudenbush & Earls, 1997).

Scientific data about ethnic groups (as numbers or as percentages) in Turkey is not available for the researchers. Even though knowledge about these groups is used in literature, actual numbers of ethnic groups and the number of members in each group are not attainable for academic purposes. Therefore, this study adopts the term 'population heterogeneity' rather than 'ethnic heterogeneity'. As a proxy indicator of heterogeneity in Turkey, population heterogeneity is used, and measured with the percentage of foreign-born residents in each province in 2000 (Karakus, 2008). Population heterogeneity variable is calculated by the researcher based on previous literature (Karakus, 2008; Ochsen, 2010; Sampson, Raudenbush & Earls, 1997) and the formula of population heterogeneity is as follows: Population Heterogeneity = (Number of Foreign-born Residents/ Province Population 2000) x 100.

Residential mobility has a strong influence on social organization (Bursik & Grasmick, 1993). Residential mobility destabilizes a community decreasing the probability of social cohesion and development of community values. It increases anonymity among residents, thus leading to erosion of social control in the community.

Sampson, Raudenbush and Earls (1997) underlined that rapid population changes is another negative factor for social organization. In that, high levels of residential mobility ‘‘fosters institutional disruption and weakened social control over collective life’’ (p.919). Empirical research has found direct effect of residential mobility on different types of crime at different unit of analysis. Especially, at the aggregate level, residential mobility has stronger effect on property crimes than other crimes (Smith & Jarjoura, 1988).

Some scholars have used the number of residents moving in and out of a province as a measure of residential mobility (Akyuz & Armstrong, 2011; Barnett & Mencken, 2002; Karakus, 2008; Basibuyuk, 2008; Kose, 2010). In-migration and out-migration in a province can adequately express population turnover in a community (Karakus, 2008). In that sense, this study uses total number of residents who migrated in and out of the provinces between 1995 and 2000. Residential mobility is calculated by the researcher and measured as follows: Residential Mobility = Total number of migrants/ Province Population 2000.

Urbanization: Shaw and McKay (1942) characterized urbanized areas with lower levels of social participation, integration and control alongside various delinquent acts (as cited in Sampson & Groves, 1989). Moreover, these areas produce criminal opportunities, while socio-economic development and higher levels of population turnover take place. Lack of social control as well as anonymity of residents to each other may induce crime in urban areas (Cole & Gramajo, 2009). Due to its significant direct effect on community structure and crime, this study employs *urbanization* as the final exogenous variable of social disorganization. In compliance with previous studies

(Comertler & Kar, 2007; Henderson & Wang, 2006; Karakus, 2008; Li, 1995), urbanization is measured with the proportion of population living in the province and district centre to total population of the province in 2000. This study uses urbanization rate calculated by TurkStat. The formula used by TurkStat for urbanization is as follows: Urbanization = Total Population of Province and District Centers 2000 / Total Province Population 2000.

Social Capital Variables

Social capital is accepted as a composite function of individual and community level elements such as civic participation, altruism and social trust (Akcomak & Weel, 2008). In measuring levels of social capital in different societies, researchers have used different indicators such as social trust, the level of civic engagement and political participation, religious institutions and religious affiliation in communities (Beyerlein & Hipp, 2005; Buonanno, Pasini & Vanin, 2006; Hudson & Chapman, 2002; Putnam, 2000; Rosenfeld, Messner & Baumer, 2001; Rose, 2000).

Similarly, in this study, social capital variables are determined in line with extant social capital literature. In this vein, faith-based engagement and political participation are selected as available social capital indicators in 2004 in Turkey.

Faith-based engagement: Rose (2000) defined religious institutions as parochial control mechanisms organizing social life in the communities. These institutions function as an essential instrument for developing other community organizations and enhancing social capital through community action and integration. Religious institutions also show to what extent members of a local community are engaged to each other based on

religious faith. Yet, lack of or insufficient number of religious organizations in a community may lead to social disorganization (Rose, 2000). In Turkish context, the number of religious institutions (mosques) in all provinces is taken as a proxy measure for faith-based engagement in line with previous studies (Basibuyuk, 2008; Guclu, 2010; Kose, 2010). The fact that mosques are built with the support of local communities in all provinces refers to local communities' willingness to ''act together to pursue a shared goal'' (Putnam, 1995). *Faith-based engagement* is measured with the number of mosques in 2004. It is calculated by the researcher and the formula for faith-based engagement is as follows: Faith-Based Engagement= (The number of mosques/ Provincial Population 2000)/ 1000.

Political participation is defined as a form of civic engagement (Putnam, 1995; Putnam, 2000). For Coleman (1990) and Elster (1989), it is an indicator of social conformity at one point in time (as cited in Coleman, 2002). Political participation is also a civic duty, which shows the willingness of citizens to intervene daily life for a common good. In this study, political participation is measured with voting rates in line with previous studies (Akcomak & Weel, 2008; Buonanno, Pasini & Vanin, 2006; Coleman, 2002; Sabatini, 2005). Voting rates for each province are electoral turnouts in local elections in 2004. This study uses voting rates reported by TurkStat. The formula used by TurkStat for the measurement of political participation is as follows: Political Participation = (Total number of citizen voted/ Total number of voters) / 100.

Control Variables

This study includes socio-economic and demographic variables that may be

related to crime rates in Turkey. Controlling for these variables, it is analyzed whether social disorganization and social capital may impose any significant impact on crime rates.

Young male population has been used as a standard demographic control variable in many studies (Akcomak & Weel, 2008; Buonanno, Pasini & Vanin, 2006; Demirci, 2007; Karakus, 2008; Land, McCall & Cohen, 1990; Rosenfeld, Messner & Baumer, 2001). Young males between the ages of 15 and 29 more likely engage in criminal activities than other males and females (Cole & Gramajo, 2009). Therefore, as a measure of young male population, this study employs the percentage of male population between 15-29 ages recorded in Census 2000. Majority of studies define the age group of youth between 15 and 29 as young adulthood age (Buonanno, Pasini & Vanin, 2006; Cole & Gramajo, 2009; Gartner, 1990; Land, McCall & Cohen, 1990; Rosenfeld, Messner & Baumer, 2001). This study also uses this group of age in order to include a larger variance of young males in the analysis. The percentage of male population is calculated by the researcher and the formula for this variable is as follows: Young Male Population = (The number of young males aged 15-29 in Census 2000/ Province Population 2000)/100.

Socio-economic development index : Many studies use geographical and population characteristics of the provinces as control variables in their studies. In these studies, it is observed that cities and counties are grouped according to their geographical location (north, south etc.) or population size (urban, rural, metropolitan

etc.). However, in this study, the provinces in Turkey are grouped in two categories: more-developed and less-developed (Onder & Ozyildirim, 2009) based on socio-economic development index score (SEDI) which shows socio-economic development of the provinces in Turkey.

As a strong construct, many scholars have used SEDI in order to measure socio-economic development of cities, counties and countries (Gattini, Sanderson, Castillo-Salgado, 2002; Mehrotra and Peltonen, 2005; Ozaslan, Dincer and Ozgur, 2006; Onder and Ozyildirim, 2009). In Turkey, SEDI is calculated by State Planning Organization (SPO), and this index includes 58 indicators selected out of 100 indicators measuring socio-demographic, structural and economic structure in Turkey. SEDI has a reliable and valid construct based on standardized values of these indicators. State Planning Organization uses principal component analysis to reduce the number of indicators into an index variable, and obtains SEDI scores for each province (Ozaslan, Dincer and Ozgur, 2006).

SEDI studies in Turkey have become an effective method of reflecting disparities across the provinces in Turkey since 1996 (Onder & Ozyildirim, 2009). State Planning Organization (SPO) has used SEDI scores in order to group provinces according to their development scores. In the first planning strategies developed by SPO, the provinces in Turkey are grouped into two groups: priority (less developed) and non-priority (more developed) provinces. In that sense, priority provinces have received more investment, incentive and subsidies in order to reduce disparities at the provincial level (Onder & Ozyildirim, 2009).

Similarly, this study adopts this categorization to group the provinces based on

their SEDI scores. As SEDI covers a variety of indicators, which may be related to the main variables of social disorganization such as SES and urbanization rate, SEDI variable is therefore dichotomized. This approach also prevents multicollinearity problem among the variables in the analysis. SEDI scores range between - 1.4 and 4.8. As minus scores indicate less development (Dincer, Özaslan & Kavasoğlu, 2003); this study treats provinces with a minus SEDI score as less developed, and with a plus SEDI score as more developed. SEDI score is dummy-coded as more developed provinces and less developed provinces. The latter is taken as the reference category. If SEDI score is lower than 0, it is coded as less developed province (0), if it is higher than 0, then it is coded as more developed province (1). Finally, in the regression analysis of the variables, using SEDI as a dummy variable resulted with a significant relationship with property crime rate (see Table 3).

Reliability and Validity Issues

Maxfield and Babbie (2008) expressed that official data recorded by public agencies is widely used in criminal justice studies. Although official data provides the researchers with many research alternatives, agency records must be used carefully due to any possible reliability and validity problem. Use of data collected for official use may produce validity problem, as data may not appropriately fit for a specific research interest. Therefore, replication of previous studies lessens any validity issue that may be experienced in the use of secondary data (Maxfield & Babbie, 2008).

Considering this approach, this study replicated the conceptualization and operationalization of independent variables in accordance with previous literature (Akcomak and Weel, 2008; Basibuyuk, 2008; Buonanno, Pasini and Vanin, 2006;

Dincer, Özaslan & Kavasoğlu, 2003; Guclu, 2010; Karakus, 2008; Kose, 2010; Onder & Ozyildirim, 2009; Sampson &Groves, 1989). In this regard, all variables had face and content validity.

Moreover, this study also used data obtained from governmental agencies. The independent variables used in this study are measured with socio-demographic data regularly collected from all registered citizens in the country. Data regarding all independent variables (SES index, family disruption, residential mobility, population heterogeneity, urbanization rate, faith-based engagement and political participation rate) are recorded continuously by census authority and TurkStat in Turkey. TurkStat uses standardized techniques for measurement of these variables. This approach also improves reliability and validity of the variables.

On the other hand, official crime statistics may have some measurement errors due to the problems experienced during data collection (e.g. underreporting and miscategorization problems). Quality of data cannot be sustained due to inconsistent reporting from law enforcement agencies (Maxfield & Babbie, 2008; Skogan, 1975). In that sense, property crimes recorded by TNP may not reflect actual crime rates in the community. However, in Turkey, recent developments in criminal justice system and use of effective methods in data collection and measurement of crimes led to a sharp increase in the records of crime rates after 2004 (Bahar & Fert, 2008). Considering this development in the system, this study used crime records of 2005, 2006 and 2007. To prevent any fluctuation problem, average number of crimes recorded in these years was used in the analysis.

Finally, Maxfield and Babbie (2008) discussed that if a specific crime record is

exclusive and exhaustive, then measurement quality is satisfied and the measurement is accepted as a valid measure. In this context, property crimes variable, as the dependent variable of this study, had a content validity, as it covered all crime types falling into the categorization of property crimes in the criminal justice system of Turkey.

Analytic Strategy

Statistical Techniques

Descriptive analysis was firstly used to indicate the central tendencies and standard deviations of the variables. Secondly, bivariate analysis was employed to discover strength and direction of relationships between the dependent and the independent variables. Allison (1999) suggested that any correlation above or closer to 0.8 is problematic. Hence, this study used 0.8 as a threshold for collinearity among the variables. In preliminary analysis of the variables, no correlation among the variables was above this cut-off point.

As a third statistical method, ordinary least squares (OLS) regression was employed as a technique to determine the relationship between the dependent variable and all other variables. More explicitly, OLS was selected as a suitable method to analyze the impact of the social disorganization and the social capital variables on property crimes. Accordingly, in three separate steps, regression models were run in order to test hypotheses of the study.

In the first step, property crime rate was regressed on the social disorganization and the social capital variables in order to understand their impacts on property crimes, controlling for age structure and socio-economic development of the provinces. The equation for this step was as follows:

$\hat{Y}$ *(Property Crimes) = a+* b_1 *X (SES) +* b_2 *X (Family Disruption) +* b_3 *X (Residential Mobility) +* b_4 *X (Population Heterogeneity) +* b_5 *X (Urbanization) +* b_6 *X (Political Participation) +* b_7 *X (Faith-based engagement) +* b_8 *X (Young Males) +* b_9 *X (SEDI)*

In the second step, political participation rate was regressed on the social disorganization variables in order to analyze impact of the structural characteristics of social disorganization variables on political participation, controlling for age structure and socio-economic development of the provinces. The equation for this step was as follows:

$\hat{Y}$ *(Political Participation) = a+* b_1 *X (SES) +* b_2 *X (Family Disruption) +* b_3 *X (Residential Mobility) +* b_4 *X (Population Heterogeneity) +* b_5 *X (Urbanization) +* b_6 *X (Young Males) +* b_7 *X (SEDI)*

In the third step, faith-based engagement rate was regressed on the social disorganization variables in order to understand their impacts on faith-based engagement, controlling for age structure and socio-economic development of the provinces. The equation for this step was as follows:

$\hat{Y}$ *(Faith-based engagement) = a+* b_1 *X (SES) +* b_2 *X (Family Disruption) +* b_3 *X (Residential Mobility) +* b_4 *X (Population Heterogeneity) +* b_5 *X (Urbanization) +* b_6 *X (Young Males) +* b_7 *X (SEDI)*

As a last statistical analysis method, mediation analysis was used to test mediation effects of the social capital variables on the relationship between the social disorganization and property crime variables. To form a mediation model with the social capital variables, this study followed the criteria proposed by Baron and Kenny (1986). Accordingly, first, the independent variables (social disorganization) must significantly

predict the mediator variables (social capital) in Step 1 and second, the dependent variable (property crime rate) in Step 2. Third, the mediator variable (social capital) must significantly predict the dependent variable (property crime rate) in Step 3. If all these criteria are met, then the effects of the independent variables on the dependent variable must decrease in the third model or the independent variables must have no significant effect (Baron & Kenny, 1986, p.1177).

After running all regression models as proposed by Baron and Kenny (1986), standardized regression coefficients (beta-β) were retrieved from the outputs of OLS regression models and used for displaying size of effects. In Figure 2, a sample mediation model was given, and accordingly [a] stands for size of effect of the independent variable on the mediator variable, [b] stands for size of effect of mediator variable on the dependent variable, and [c] stands for size of effect of the independent variable on dependent variable. Based on this mediation model, mediation effects of the social capital variables were tested.

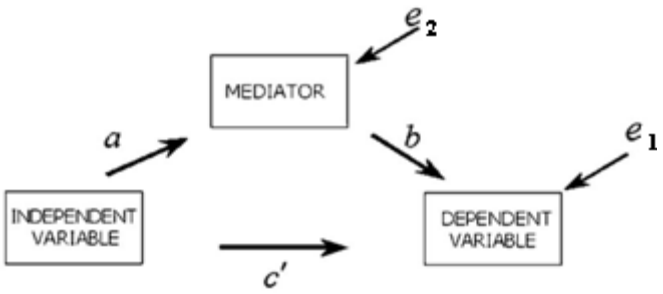


Figure 2. Mediation model (MacKinnon et al., 2007, p. 595).

Finally, Statistical Package for the Social Sciences (SPSS version 16) software was used for running all regression models and analyzing the data in this study.

Temporal Order in the Regression Models

Mediation analysis not only requires a causal or associational relationship, but also a temporal order among the variables (Baron & Kenny, 1986, p. 1176; Menard, 2010, p. 145). In that sense, this study followed a temporal order in the sequence of the variables in the regression models. Based on theoretical assumptions, first, social disorganization takes place, and then levels of social capital decreases, and at the final stage, property crimes occur. Accordingly, in chronological order, the social disorganization variables of Census 2000 (except divorce rates for 2001-2003), the social capital variables of 2004, and property crimes of 2005-2007 were used in the regression and mediation models.

Moreover, use of census data is also quite common in the studies on crime analysis. Sampson, Raudenbush and Earls (1997) used data from Census 1990 of the U.S. in the explanation of homicide cases in 343 neighborhoods of Chicago in 1995. Basibuyuk (2008), Karakus (2008), Kose (2010), Guclu (2010) used Census 2000 of Turkey in the prediction of different types of crimes committed in 2005 and 2006.

Finally, due to the nature of theory and statistical use of temporal order in regression analysis in previous literature, the researcher did not assume any reliability and validity issue about the specification of the models in a temporal order in the study.

CHAPTER V

ANALYSES AND FINDINGS

This chapter presents the findings of the study and the analysis of the relationship between social disorganization, social capital and property crimes. Distribution of property crimes across the provinces and the structural characteristics of the provinces are firstly examined. The initial relationship between property crimes and the independent variables are secondly observed in correlation analyses. Thirdly, the analyses run in three regression models test research hypotheses and answer the research questions of the study. Finally, mediation analysis shows the effects of social disorganization on property crimes via the social capital variables.

Descriptive Statistics

Descriptive statistics displayed in Table 1 indicated that there was a notable variation among the provinces in Turkey based on the variables of the study. Property crime rate per 1000 residents in the provinces varied between 0.37 and 10.94. This indicated that average rate of property crimes for 2005, 2006 and 2007 significantly varied across the provinces in Turkey. The average of property crime rate for these years was 3.15 per 1000 residents.

Social disorganization variables also displayed a wide range of variation across the provinces in Turkey. Relatively, family disruption rate measured with divorce rates varied from 0.07 to 2.83. The average divorce rate for the years 2001-2003 was 1.14 per 1000 residents. Residential mobility rate measured with the proportion of the number of immigrants and emigrants within the country to total province population (Census 2000) varied from 0.09 to 0.37. The average of residential mobility rate was

0.15 per 1000 residents. Urbanization rate measured with the proportion of population living in the centre of the provinces and districts to total province population varied from 26% to 90.7%. The average of urbanization rate was 55.48%. Population heterogeneity rate measured with the proportion of number of foreign-born residents to total province population ranged from 0.002% to 1.36%. The average of population heterogeneity rate was 0.14%. Socio-economic status index (SES) also displayed a significant variation among the provinces of Turkey, ranging from -3.84 to 10.88. This finding indicated that there was a spectacular socio-economic gap among the provinces according to Census 2000.

Social capital variables also showed that differing levels of social capital was observed across the provinces in Turkey. Political participation rate measured with percentage of residents participating to local elections ranged from 61.1% to 86.8%. The average rate of participation was 74.8% in 2004. Faith-based engagement rate measured with the number of mosques ranged from 0.28 to 6.51. The average rate for faith-based engagement was 1.64 per 1000 residents in 2004.

Similar to the previous variables, two control variables proved that the provinces displayed different demographic and socio-economic development characteristics. Based on the mean value of socio-economic development index (SEDI) variable, 40% of the provinces were developed, while 60% of the provinces were underdeveloped. Additionally, as a demographic indicator, young male population rate measured with the percentage of young males aged between 15 and 29 ranged from 10.58% to 28.06%. This finding also showed that there was a wide range of dispersion of young male population across the provinces in Turkey.

Finally, Table 1 also shows that property crime rate and faith-based engagement rate are not normally distributed. Previous literature shows that some studies transformed variables of intervening dimension of social disorganization and crime rates to induce normality (Barnett & Mencken, 2002; Sampson & Groves, 1989; Sun, Triplet & Gainey, 2004). Therefore, faith-based engagement rate (as one of the intervening variables in the study), and property crime rate were log transformed in line with previous studies. This transformation method was employed as solution for positive skewness observed in the distribution of these variables (Tabachnick & Fidell, 2007).

Table 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Dependent Variable							
Property Crime Rate (per 1000)	80	0.37	10.94	3.15	2.26	1.42	1.62
Property Crime Rate (Lg)		-0.43	1.04	0.40	0.30	-0.04	-0.23
Independent Variables							
Family Disruption Rate (per 1000)	80	0.07	2.83	1.14	0.62	0.25	-0.10
Residential Mobility Rate (per 1000)	80	0.09	0.37	0.15	0.04	1.93	7.04
Urbanization Rate (%)	80	26.06	90.69	55.48	11.99	0.53	1.00
Population Heterogeneity Rate (%)	80	0.002	1.36	0.14	0.23	3.19	11.62
Socio-economic Status (SES) Index	80	-3.84	10.88	-0.05	2.59	1.40	3.61
Faith-based Engagement Rate (per 1000)	80	0.28	6.51	1.64	0.97	2.38	8.29
Faith-based Engagement Rate (Lg)		-0.55	0.81	1.56	0.22	0.58	1.17
Political Participation Rate (%)	80	61.10	86.80	74.80	6.47	-0.01	-0.62
Control Variables							
Young Male Population Rate (%)	80	10.58	28.06	14.88	2.24	2.79	14.95
Socioeconomic-Development Index (SEDI) (Ref. Underdeveloped Province=0)							
Developed Province (1)	80	0.00	1.00	0.40	0.49	0.42	-1.87

Note: The variables with (Lg) were log-transformed.

Bivariate Analysis

Table 2 shows the results of bivariate correlations between property crime rate, social disorganization (family disruption, residential mobility, urbanization, population heterogeneity, and SES) and social capital (faith-based engagement and political participation) and control variables (SEDI and young male population). The findings of bivariate analysis indicated that majority of research hypotheses were supported in line with the research hypotheses.

Property crimes rate was significantly correlated with the social disorganization variables except for residential mobility rate (r = -.11, p > 0.05). Family disruption rate (r =.59, p < 0.01), population heterogeneity rate (r = .33, p < 0.01), urbanization rate (r = .56, p < 0.01) and SES (r = .71, p < 0.01) were positively related to property crimes. However, SES was not related to property crime rate as hypothesized. These findings supported the Research Hypotheses H_2, H_4 and H_5, and indicated that the provinces with higher levels of family disruption, population heterogeneity and urbanization had the higher rates of property crime.

Surprisingly, the findings on the relationship between property crime rate and one of the social capital variables did not support the research hypotheses. Political participation rate (r = .20, p > 0.05) was not related to property crime rates as hypothesized (H_6). Nevertheless, the finding for faith-based engagement rate (r =-.25, p < 0.05) supported the hypothesis as expected (H_7).

On the other hand, the social disorganization variables were not related to the social capital variables as predicted. Social disorganization variables imposed separate effects on both social capital variables.

Accordingly, SES was the only social disorganization variable that had a significant and positive relationship with political participation rate ($r = .26$, $p < 0.05$). As expected, this finding supported the Research Hypothesis (H_8). Family disruption rate ($r = .57$, $p < 0.01$) were significantly and positively correlated with political participation rate. However, this finding did not support the Research Hypothesis (H_9). Unfortunately, urbanization rate, residential mobility rate and population heterogeneity rate also did not have any significant relationship with political participation rate, while rejecting the Hypotheses $H_{10,}$ H_{11} and H_{12}.

Moreover, population heterogeneity rate ($r = -.28$, $p < 0.05$) and urbanization ($r = -.56$, $p < 0.01$) were related to faith-based engagement rate as hypothesized (H_{16} and H_{17}). Contrary to the hypotheses (H_{13} and H_{15}), residential mobility rate ($r = .22$, $p < 0.05$) and SES ($r = -.40$, $p < 0.05$) were not related to faith-based engagement rate. Lastly, family disruption rate did not have any significant relationship with faith-based engagement rate in accordance with the Research Hypothesis (H_{14}).

Table 2

Bivariate Correlations

		1	2	3	4	5	6	7	8	9	10
1	Property Crime Rates (Lg) (per 1000)	1.00									
2	Family Disruption Rate (per 1000)	.59**	1.00								
3	Residential Mobility Rate (per 1000)	-.11	-.004	1.00							
4	Population Heterogeneity Rate (%)	.33**	.26*	.12	1.00						
5	Urbanization Rate (%)	.56**	.14	-.12	.04	1.00					
6	SES	.71**	.50**	.17	.37**	.55**	1.00				
7	Faith-based Engagement (Lg) (per 1000)	-.25*	-.13	.22*	-.28*	-.56**	-.40*	1.00			
8	Political Participation Rate (%)	.20	.57**	-.09	.02	-.03	.26*	.13	1.00		
9	Young Male Population Rate (%)	-.13	-.32**	.44*	.05	.16	-.03	-.33**	-.27*	1.00	
10	SEDI (Developed Province =1)	.68**	.51**	-.006	.28*	.44**	.71**	-.39*	.38**	-.08	1.00

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Note: The variables with (Lg) were log-transformed.

Multivariate Analysis

Ordinary Least Squares regression models were used to predict political participation (2004), faith-based engagement (2004) and property crime rates (2005-2007) in the provinces of Turkey (Table 3). Three multivariate regression models separately examined the effects of the social disorganization on social capital (Model 1 and Model 2), and the impact of social capital and social disorganization variables on property crime rates (Model 3), controlling for young male population and socio-economic development index (SEDI).

Prior to the analyses, outliers and influential cases were detected in order to prevent the results to be misleading. In all regression models, Antalya was found out to be an outlier; therefore, it was omitted from the dataset (see Appendix A for the Model 3). The fact that Antalya is a touristic location highly populated with foreign-born residents led this province to have higher values for one of the variables (population heterogeneity). In all models, this case turned out to be an outlying case. Hence, the analysis was run with 80 cases excluding the case Antalya.

Moreover, before running the final analyses, it was explored whether data met the assumptions of ordinary least squares (see Appendix B for the diagnoses of linearity, normality and homoscedasticity) (Tabachnick & Fidell, 2007). It was discovered that two of the dependent variables (property crime rates and faith-based engagement) was not normally distributed. As discussed before, in line with previous literature, these variables were log transformed to induce normality.

Table 3

Estimates of OLS Regression Models Predicting Political Participation (2004), Faith-based Engagement (2004) and Property Crime Rates (2005-2007) in Turkey, Provinces

	Model 1 Political Participation Rate		Model 2 Faith-based Engagement Rate		Model 3 Property Crime Rate	
Predictor Variables	b	β	b	β	b	β
(Constant)	78.20*** (5.99)	-	.94*** (0.17)	-	0.76** (0.35)	-
Social Disorganization Variables						
Family Disruption Rate (per 1000)	5.22*** (1.23)	.49	-0.03 (0.03)	-.08	0.16*** (0.04)	.33
Population Heterogeneity Rate (%)	-4.75* (2.76)	-.17	-0.19** (0.08)	-.20	0.07 (0.09)	.05
Residential Mobility Rate (per 1000)	-18.17 (16.79)	-.12	2.29*** (0.48)	.44	-0.35 (0.64)	-.05
SES	.17 (0.40)	.07	-0.007 (0.12)	-.08	0.03** (0.01)	.24
Urbanization Rate (%)	-0.13** (0.06)	-.25	-0.006 (0.002)	-.30	0.005** (0.002)	.18
Social Capital Variables						
Faith-based Engagement Rate (Lg) (per 1000)	-	-	-	-	-0.26* (0.14)	-.19
Political Participation Rate (%)	-	-	-	-	-0.007* (0.004)	-.15
Control Variables						
Young Male Population Rate (%)	0.03 (0.33)	.01	-0.05*** (0.009)	-.50	-0.01 (0.01)	-.13
SEDI (Developed Province =1)	3.17* (1.78)	.24	-0.06 (0.05)	-.13	0.13** (0.06)	.21
Adjusted R^2	0.35		0.55		0.69	
F	7.18***		14.72***		20.88***	
N	80		80		80	

*p≤ .10 **p ≤.05 ***p ≤.01 Note: Standard errors of b in parentheses. b = unstandardized regression coefficient and β = standardized regression coefficient.

Finally, after running all regression models, multicollinearity was not observed as a problem in the models. For all models, tolerance values for each variable were higher than .1 and variation inflation factor (VIF) values were less than 5, which showed the absence of multicollinearity among the predictor variables (Mertler & Vannatta, 2005).

Political Participation Rate

The first model was designed to determine which the social disorganization variables predicted political participation rate, controlling for young male population rate and SEDI. This model explained about 35% of the variance in political participation rate. The F statistic indicated that the overall regression model was statistically significant (F (7, 80) = 7.18, $p < 0.01$).

In Model 1, the findings supported only two of the Research Hypotheses (H_{11} and H_{12}), while rejecting other Hypotheses (H_8, H_9 and H_{10}). Holding all other variables in the model constant, urbanization rate had a significant negative effect on political participation rate (b = -0.13, $p < 0.05$). As expected, in the provinces where urbanization rates were higher, the level of political participation was lower. Population heterogeneity rate also significantly predicted political participation (b = -4.75, $p < 0.10$). This finding indicated that the provinces with higher rates of population heterogeneity had lower rates of political participation. Residential mobility rate was also negatively related to political participation rate (b = -18.17, $p > 0.10$). However, this variable did not have any statistically significant effect on political participation rate. The remaining variables of social disorganization (family disruption rate and SES) were also not related to political participation rate as proposed.

Faith-based Engagement Rate

The second model explored whether the social disorganization variables predicted faith-based engagement, controlling for young male population rate and SEDI. 55% of the variance in faith-based engagement rate was explained by the social disorganization variables in the model. The overall model was statistically significant (F (7, 80) = 14.72, $p < 0.01$).

In Model 2, family disruption rate, population heterogeneity rate and urbanization rate were related to faith-based engagement rate in the hypothesized directions. However, family disruption rate (b = -0.03, $p > 0.10$) and urbanization (b = -0.006, $p > 0.10$) did not have any significant effects on this indicator of social capital. These findings rejected two of the Hypotheses (H_{14} and H_{16}). Similarly, SES (b = -0.007, p > 0.10) and residential mobility rate (b = 2.29, $p < 0.01$) predicted faith-based engagement contrary to the Hypotheses ($H_{13,}$ and H_{15}). In line with the Research Hypotheses (H_{17}), population heterogeneity rate (b = -0.19, $p < 0.05$) significantly and negatively predicted faith-based engagement rate. Among all other results in this model, the finding for the relationship between population heterogeneity and faith-based engagement satisfied the theoretical expectation. In other words, the provinces with higher rates of population heterogeneity had lower levels of faith-based engagement.

Property Crime Rate

The final model analyzed the effects of the social disorganization and the social capital variables on property crime rates, controlling for young male population rate and SEDI. The variation explained by this model was 69%, which was the largest variation explained in comparison to that of previous models. The overall regression model was

again significant (F (7, 80) = 20.88, $p < 0.01$).

In Model 3, family disruption rate, population heterogeneity rate, SES and urbanization rate were positively related to property crime rate. Unexpectedly, residential mobility rate was negatively related to property crime rate (b = -0.35, $p >$ 0.10). Population heterogeneity rate was not significantly related to property crime rate (b = 0.07, $p >$ 0.10). Contrary to the Hypothesis (H_1), SES positively predicted property crimes (b =0.03, p < 0.05). On the other hand, family disruption rate (b = 0.16, $p < 0.01$) and urbanization rate (b = 0.005, $p < 0.05$) significantly predicted property crime rate as hypothesized. Therefore, these findings supported only two of the Research Hypotheses (H_2 and H_4).Overall, the Research Hypotheses H_1, H_3 and H_5 were not supported with these findings in Model 3.

Moreover, social capital variables significantly and negatively predicted property crime rate. Both faith-based engagement rate (b =-0.26, $p < 0.10$) and political participation rate (b =-0.007, $p < 0.10$) were related to property crime rate as hypothesized. Therefore, these findings supported the Research Hypotheses (H_6 and H_7).

Mediation Analysis

A further analysis of the hypothesized effects of the structural sources of social disorganization on property crime rate was conducted with a mediation analysis. In order to test mediation effect of social capital, following regression equations were estimated in three steps (Baron & Kenny, 1986). In the first step, each of the social capital variables (political participation and faith-based engagement) were regressed on the structural sources of social disorganization (SES, family disruption, residential

mobility, population heterogeneity, urbanization), and in the second step, property crime rate was regressed on the social disorganization variables, controlling for age structure (young male population) and socio-economic development (SEDI). In the third and last step, property crime rate was regressed on the structural sources of social disorganization and the social capital variables with the control variables. Based on the findings, standardized coefficients for the effects of the social disorganization and the social capital variables on property crime rate were displayed in *Figure 3.*

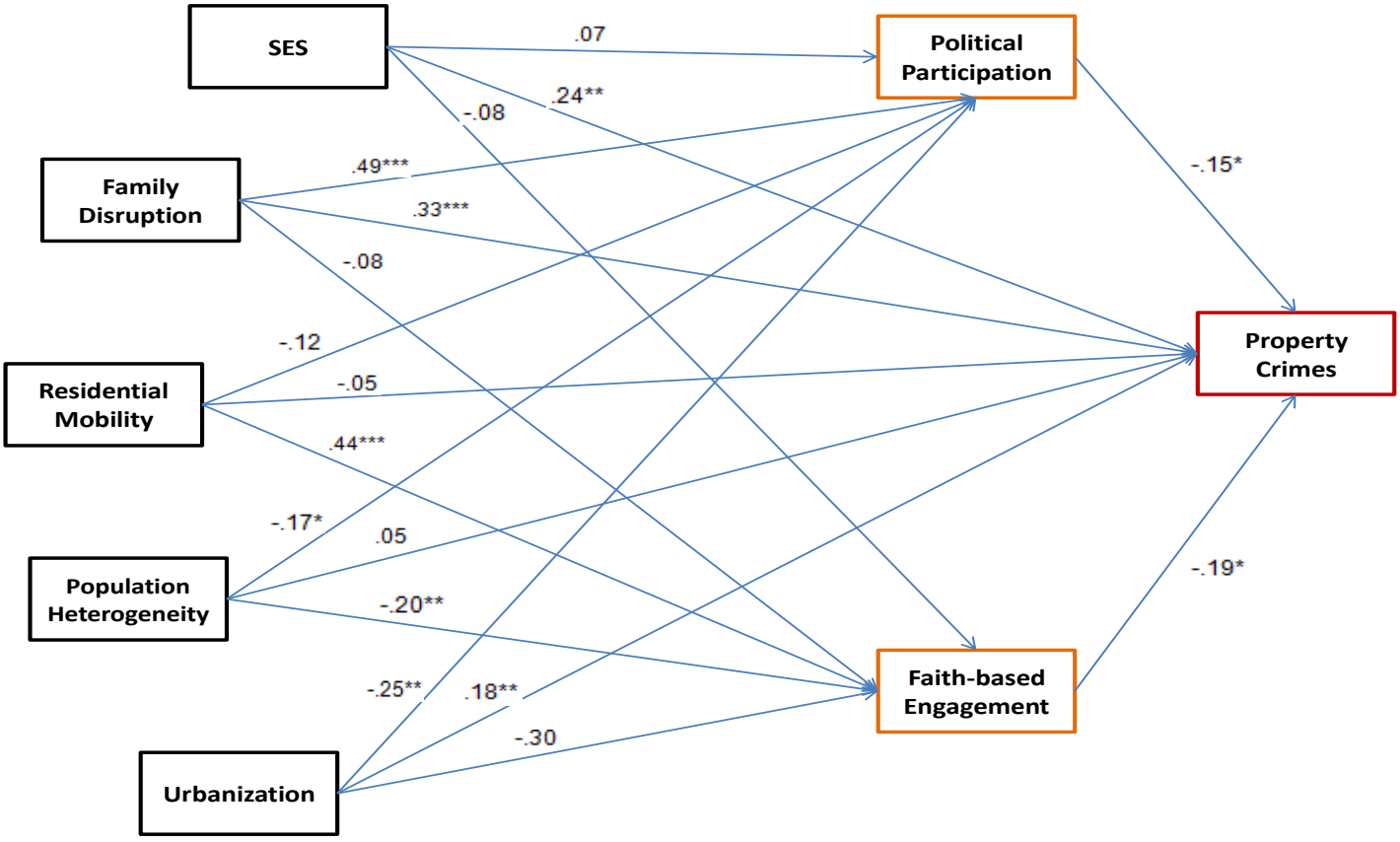


Figure 3. Standardized regression coefficients for the determinants of property crime rate. All estimates in the regression models controlled for young male population and SEDI.

Mediation Effects of Political Participation Rate

Table 4 shows the standardized regression coefficients for the mediation model

of political participation rate. In the Step 1, family disruption rate (β = .49, $p < 0.01$), urbanization rate (β = -.25, $p < 0.05$) and population heterogeneity rate (β = -.17, $p < 0.10$) significantly predicted political participation rate. On the other hand, SES (β = .07, $p > 0.10$) and residential mobility rate (β = -.12, $p > 0.10$) did not have any significant effects on political participation rate.

In the Step 2, SES (β = .25, $p < 0.05$), family disruption rate (β = .28, $p < 0.01$) and urbanization rate (β = .28, $p < 0.01$) exerted significant effects on property crime rate. However, residential mobility rate (β = -.12, $p > 0.10$) and population heterogeneity rate (β = .12, $p > 0.10$) did not significantly predict property crime rate.

In the Step 3, with the inclusion of political participation and faith-based engagement rates as mediator variables, SES (β = .24, $p < 0.05$), family disruption rate (β = .33, $p < 0.01$) and urbanization rate (β = .18, $p < 0.05$) had significant effects on property crime rate. However, population heterogeneity rate (β = .05, $p > 0.10$) and residential mobility rate (β = -.05, $p > 0.10$) were not related to property crime rate.

Displaying non-significant effects in different steps, SES, residential mobility and population heterogeneity rates did not meet the Baron and Kenny's (1986) three criteria to establish a mediation model. Family disruption rate and urbanization rate (independent variables) were significantly related to political participation rate (mediator variable) in the Step 1, and property crime rate (dependent variable) in the Step 2 and the Step 3 as proposed by Baron and Kenny (1986). However, in the Step 3, the effect of family disruption rate on property crime rate increased from .28 to .38 violating the condition set by Baron and Kenny (1986). Therefore, findings of the regression analysis provided partial support for political participation rate as a mediator variable. More

explicitly, political participation rate only mediated the relationship between property crime rate and urbanization rate. This finding also supported only one hypothesis (H_{20}).

Table 4

Decomposition of the Effects of Social Disorganization Variables and Political Participation Rate on Property Crime Rate

Predictors	Political Participation Rate	Property Crime Rate(Lg)	
Social Disorganization Variables	Step 1	Step 2	Step 3
SES	.07	.25**	.24**
Residential Mobility Rate	-.12	-.12	-.05
Family Disruption Rate	.49***	.28***	.33***
Urbanization Rate	-.25**	.28***	.18**
Population Heterogeneity Rate	-.17*	.12	.05
Social Capital Variables			
Political Participation Rate	N/A	N/A	-.15*
Faith-based Engagement Rate(Lg)	N/A	N/A	-.19*
Control Variables			
Young Male Population Rate	.01	-.03	-.13
SEDI (Developed Province =1)	.24*	.20**	.21**

*p ≤ .10 **p ≤. 05 ***p ≤ .01
N/A-Not Applicable
Note: Standardized regression coefficients were used in the table.

Mediation Effects of Faith-based Engagement Rate

Table 5 shows the standardized regression coefficients for the mediation model of faith-based engagement rate. In the Step 1, two of structural characteristics of social disorganization, residential mobility rate (β = .44, $p < 0.01$) and population heterogeneity

rate (β = -.20, $p < 0.05$) were found to be significant predictors of faith-based engagement rate. Contrarily, SES (β = -.08, $p > 0.10$), family disruption rate (β = -.08, $p > 0.10$) and urbanization rate (β = -.30, $p > 0.10$) did not have any significant effects on faith-based engagement rate.

The findings for the Step 2 and the Step 3 in the mediation model for political participation rate were the same for the Step 2 and the Step 3 in this mediation model for faith-based engagement. Even though, SES, family disruption and urbanization rates significantly predicted property crime rate in the Steps 2 and 3, these variables were not significantly related to faith-based engagement rate in the Step 1. Conversely, residential mobility and population heterogeneity rates significantly predicted faith-based engagement rate in the Step 1, but did not predict property crime rate in the Steps 2 and 3. Therefore, all of the social disorganization variables violated Baron and Kenny's criteria (1986) for the establishment of a mediation model.

Finally, the second part of analysis did not provide any support for faith-based engagement rate as a mediator variable. More clearly, faith-based engagement rate did not transmit the effects of structural characteristics of social disorganization on property crime rate. These findings rejected the Hypotheses (H_{23}, H_{24}, H_{25}, H_{26} and H_{27}).

Table 5

Decomposition of the Effects of Social Disorganization Variables and Faith-based Engagement Rate on Property Crime Rate

Predictors	Faith-based Engagement Rate	Property Crime Rate(Lg)	
Social Disorganization Variables	Step 1	Step 2	Step 3
SES	-.08	.25**	.24**
Residential Mobility Rate	.44***	-.12	-.05
Family Disruption Rate	-.08	.28***	.33***
Urbanization Rate	-.30	.28***	.18**
Population Heterogeneity Rate	-.20**	.12	.05
Social Capital Variables			
Political Participation Rate	N/A	N/A	-.15*
Faith-based Engagement Rate(Lg)	N/A	N/A	-.19*
Control Variables			
Young Male Population Rate	-.50***	-.03	-.13
SEDI (Developed Province =1)	-.13	.20**	.21**

*p ≤ .10 **p ≤ .05 ***p ≤ .01
N/A-Not Applicable
Note: Standardized regression coefficients were used in the table.

CHAPTER VI

CONCLUSION

The final chapter presented a discussion of the findings of the study. The discussion mainly focused on the relevance of social disorganization theory in the explanation of property crime rate in Turkey. Accordingly, the findings for each exogenous element of social disorganization were compared with the previous literature. A further discussion focused on the use of social capital as an intervening dimension between structural characteristics of social disorganization and property crime rate. Moreover, based on the findings of the current study, some policy recommendations were provided. Finally, limitations of the study were explained, and suggestions for further studies were mentioned.

Discussion

The extended social disorganization model proposed by Sampson and Groves (1989) was rarely tested in previous literature (Lowenkamp, Cullen & Pratt, 2003; Sun, Triplet & Gainey, 2004; Veysey & Messner, 1999). Therefore, this study sought evidence for the viability of this framework by replicating their theoretical framework and testing it for the analysis of property crimes in Turkey. Except for the inclusion of social capital as an intervening dimension between exogenous characteristics of social disorganization and crime rates, their original model was run in three multivariate regression models. Each of social capital indicators were regressed on social disorganization factors and then, property crime rate was regressed on both social capital and social disorganization variables. The findings of this study showed that

social disorganization approach as measured here provided partial explanation of property crime rates in Turkey.

Socioeconomic status (SES) had a significant effect on property crime rate. The provinces with a higher socio-economic status had the highest level of property crime rate. Even though this finding did not support the research hypothesis, it was consistent with the extant literature (Sampson & Groves, 1989; Sun, Triplet & Gainey, 2004).

Previous literature found that family disruption contributed to the weakening of social ties and local organizations in urban and rural communities, and therefore led to disorganization and crime (Barnett & Mencken, 2002; Messner & Rosenfeld, 1994; Sampson, 1987; Sampson, Morenoff & Earls, 1999). Similarly, in this study, family disruption was positively related to property crime rate. The finding on the relationship between family disruption rate and property crime rate was in line with the previous studies. Like family disruption, urbanization rate had a significant positive effect on property crime rate. In the same way, Sampson and Groves (1989) found a significant relationship between urbanization and total victimization rate.

Population heterogeneity, as another exogenous element of social disorganization, had a positive but non-significant effect on property crime rate. This result was not consistent with the literature. Osgood and Chambers (2000), Sampson and Groves (1989), Shaw and McKay (1942), and Sun, Triplet and Gainey (2004) found that ethnic heterogeneity was a strong predictor of crime rates due to its effects on social cohesion and social trust.

Residential mobility rate were not related to property crimes. In original formulation of Shaw and McKay (1942), residential mobility was a root cause of social

disorganization in the community, thwarting the share of common values and establishment of local organizations. In a supportive manner, Bursik and Grasmick (1993) and Sampson, Earls and Raudenbush (1997) furthered that residential mobility destabilizes the social control in a community. In this regard, this finding of study did not provide a plausible support to the original theoretical assumption. However, this finding was also in accordance with the finding of Osgood and Chambers (2000). For Osgood and Chambers, the reason for this non-significant relationship may be related to other characteristics of a community. Warner (1999) explains this inconsistency by underlying the fact that effects of residential mobility are circumvented by urban subculture that provides survival techniques for its members, and ignores traditional value system shared within the larger society.

At first glance, based on the effects of these variables on property crime rate, the findings of this study only supported two main propositions (family disruption and urbanization) inserted by Sampson and Groves (1989) into the original social disorganization model of Shaw and McKay (1942). The remaining exogenous elements of social disorganization (SES, population heterogeneity and residential mobility) did not have any expected effects on property crime rate.

Similarly, in the mediation analysis, use of faith-based engagement and political participation rates as mediators between the structural factors of social disorganization and property crime rate provided marginal support to the theory. Political participation rate partially mediated the relationship between property crime rate and urbanization rate, while faith-based engagement rate did not mediate the effects of social disorganization variables on property crime rate. Yet, these findings were also

consistent with the findings of previous literature (Sampson & Groves, 1989; Veysey & Messner, 1999, Sun, Triplet & Gainey, 2004) noting a relative support for intervening dimensions in the theoretical model.

Policy Recommendations

Macro level social facts remain constant determinants of social disorganization in the urban areas. Family disruption, changes in socio-economic status of the individuals, residential mobility, population heterogeneity and population growth in urban areas are ever-changing factors of social disorganization and becoming indicators of a well functioning social system. Crime and delinquency are also social facts emerging with above-mentioned aspects of life in the communities. Above all, crime and delinquency are still expected outcomes of social disorganization in the community. In spite of projects and programs designed by local and federal governments for the prevention of crimes in socially disorganized areas of the cities, crime as a social fact continuously co-exists with the causes and indicators of social disorganization. Therefore, any kind of intervention to the root causes of disorganization has to be comprehensive and planned in a long-term manner.

However, in practice, the role of the social capital as an intervention mechanism appears to be undermined or never considered as important as Putnam (2000) stressed. Undoubtedly, community efforts in the form of social capital have the key role in solving crime problems in the disorganized societies. In a supportive manner, earlier studies use notions of collective efficacy and social capital as the indicators of community social organization. Both collective efficacy and social capital are necessary social mechanisms for community organization and for prevention of delinquency and

crime (Putnam, 2000; Sampson & Groves, 1989, Sampson, Raudenbush & Earls, 1997).

Therefore, this study used social capital as a mediating structure between social disorganization and property crimes, and operationalized social capital with the levels of faith-based engagement and political participation in the provinces of Turkey. Both notions of social capital relatively refer to social unity and social conformity to the rules of democracy. In line with this understanding, the implications of this study can be interpreted to the development of social unity and social conformity in the community.

The findings of current research may not directly imply policies and practical solutions for law enforcement bodies regarding deterrence of crime incidents and crime analysis. However, in compliance with the essence of the research, it may be advisable for police departments to improve community policing in their jurisdictions with the idea of contributing to community social capital and, in return, creating a safer neighborhood. In other words, police may look for opportunities to develop relationships with the community organizations and members of the community. Participation to community activities (e.g. festivals, religious celebrations) may build a bridge between police and the community. In other words, it may help increase bridging social capital in the community (Akcomak & Weel, 2008). To this end, citizen police academies may also be encouraged to establish in the provinces of Turkey. In coordination with provincial directorates of public education, seminars, briefings and conferences about policing activities and public security may be held for raising awareness of the citizens in the community. These activities may be productive in two ways: First, social trust and public perceptions towards police will develop in a positive direction (Hawdon, 2008). Second,

the citizens get closer to the law enforcement bodies and help the police in preventing and solving future cases. This effort will also increase the willingness of citizens to cooperate with police (e.g. number of calls for notifying police about the suspected persons and events in the neighborhood). Second, they learn how to prevent property crimes in the community and not to become a victim of property crimes.

Moreover, a public safety class may be inserted into the curricula of primary and secondary schools in order to help the children have a sense of law-abiding citizenship at a very early age. All educational activities may improve the image of police and the understanding of policing in public eye and decrease the distance between police and the citizens in the minds of the citizens.

Furthermore, in Turkey, municipalities and district governorates should hold the main responsibility of creating opportunities for social networks and encouraging individuals to participate to community organizational life, and of increasing the sense of community membership (Putnam, 2000). Thus, creating social networks in a community will unify the members from different cultural backgrounds (Wong, 2007), and make them familiar to each other and work together to the benefit of the community.

Communities act as biological bodies, and with their functional internal systems, communities not only control but also diagnose any indication of social problem before its existence. In that sense, a community may prevent or decrease the frequency of any property crime incidence with an effective neighborhood watch conducted on a voluntary basis. Moreover, community efforts to support the residents in need and sharing the goods with the poor people in the community may help decrease socio-economic strain on the families. Otherwise, some members of the community will be

more likely to commit a property crime to meet their basic needs (Wong, 2007).

Likewise, promoting the chances of attending school for the youth and organizing more extracurricular activities for the teenagers in the community are possible with the joint efforts of the community members and school administrations. Attachment of youth to the community will also help decrease juvenile delinquency and the number of property crimes committed by juveniles (Sampson & Groves, 1989).

Finally, it is essential to underlie that increasing levels of social unity and conformity as a binding form of social capital are more likely to decrease property crimes in the community. As Putnam (2000) mentioned, devastating effects of exogenous dimensions of social disorganization on society will be absorbed by social capital (e.g. social trust, networks, engagement), and the community itself will create safer areas to live for its residents (p.307).

Limitations and Recommendations for Further Research

The study of property crimes in Turkey provided partial support for the social disorganization model proposed by Sampson and Groves (1989). Enough support was found to indicate the applicability of the theory in a different cultural setting other than the United Kingdom and the United States. However, some limitations of the study should also be mentioned here.

First, this study was limited to a small number of cases (81), which is the number of the provinces in Turkey. Unit of analysis was also the provinces. Therefore, this study tested for linear relationships between predictor and dependent variables at the aggregate level. Second, this study had a cross-sectional design in essence, however, the analysis was run with the variables from different years in a temporal order. Property

crime rate was the average of three-year period (2005-2007), and social capital variables were from 2004, while predictor variables were obtained from Census 2000 and divorce rate was the average of 2001-2003.

Finally, use of police records of crime revealed a few issues as a limitation of this study. As Maxfield and Babbie (2008) argued, property crime rate measured based on the police records might have reliability issues. Moreover, crime rates employed in the study only referred to the number of crimes known to police. The analysis excluded crimes known to gendarmerie, which operates in less populated rural areas. Therefore, crimes recorded by police solely covered the police jurisdiction, not all the country. Similarly, property crimes (dependent variable) data was limited to the province centers and districts, while all independent variables referred to the whole province including province centre, districts, towns and villages. Hence, statistical inference and generalization of the results was only valid for the parts of the provinces and districts within police jurisdiction.

In spite of limitations, this study by testing social disorganization theory as a full model was an important step toward a better understanding of the factors that determine property crimes in Turkey. Using social capital indicators as an intervening dimension also contributed to the development of theoretical framework. Therefore, some suggestions may also be given for further studies.

In this study, using a secondary dataset collected from governmental agencies helped analyze the relationship between social disorganization and property crimes at the aggregate level, and provided the researcher a certain understanding of the topic. For a further study, therefore, conducting a survey (e.g. British Crime Survey and

National Crime Victimization Survey) with a representative sample size will be more fruitful in the explanation of social disorganization in the communities. Additionally, a longitudinal design or time series analysis may be more useful to observe the variation of crime rates across the years in relation to the variables of social disorganization framework.

Due to the nature of official dataset, developing measurement of social disorganization variables such as family disruption, residential mobility, and population heterogeneity turned out to be a significant methodological aspect for this study. Hence, using different indicators to measure these variables may provide a better analysis of social disorganization in future studies. Similarly, further analysis of mediating impact of social capital on the relationship between social disorganization and property crimes will only be possible by adding new social capital variables. In that, two dimensions of social capital (political participation and faith-based engagement) used in this study might not measure social capital exactly and explain the whole variation of property crimes.

Findings of this study also suggested that a model specification provides better analysis of the social processes leading to crime. Inclusion of new dimensions omitted in previous studies may also improve the explanatory power of theoretical model. A proposed conceptual model for further analysis of crime in relation to social disorganization may be as follows:

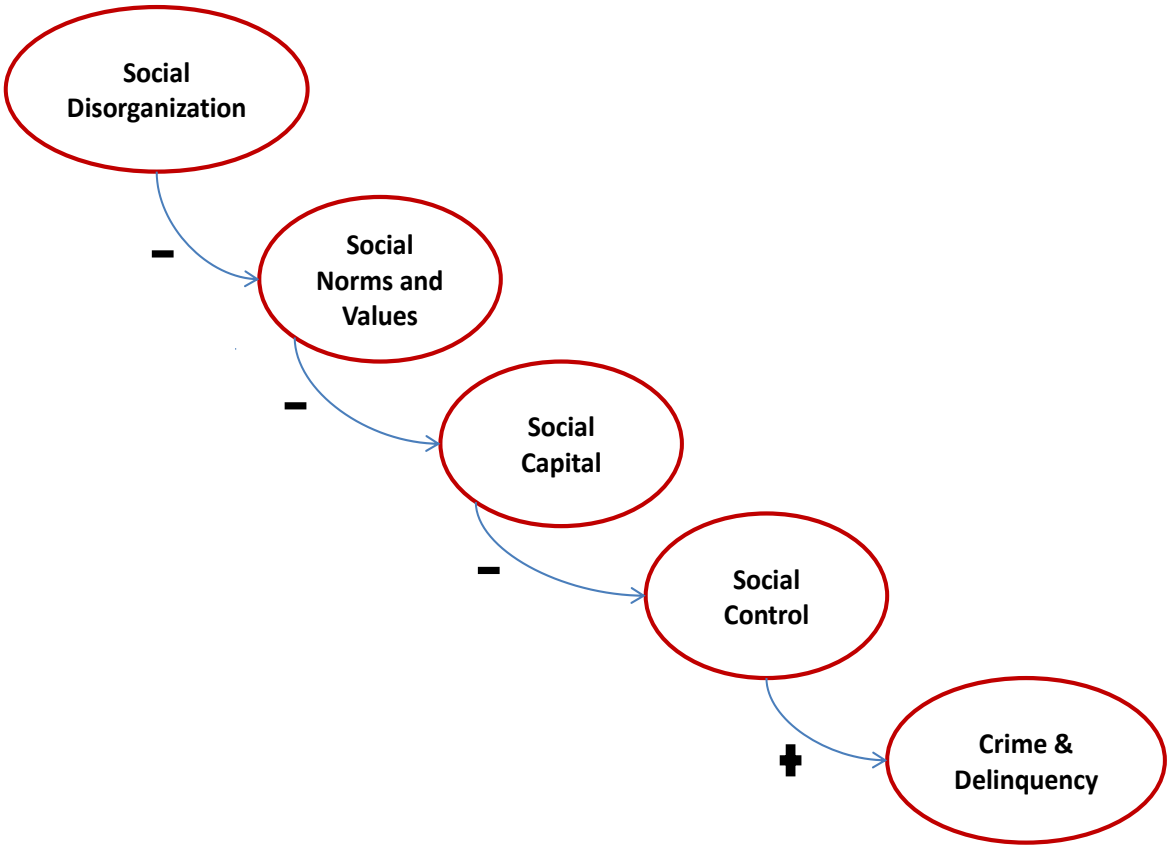


Figure 4. A conceptual model on the social processes linking social disorganization to crime & delinquency.

The conceptual model in Figure 4 links social processes from social disorganization to crime and delinquency. A logical explanation of proposed links in the model may be presented in three stages: In first stage, characteristics of social structure (exogenous dimensions of social disorganization) have some certain negative effects on the community's social norms and values. Social structure may impede or decrease the

chances of sharing of these norms and values, communication and interaction among the members of the community. In second stage, social capital cannot be accumulated due to the inability of the community to share the same norms, values and a common goal for the benefit of the community. In third stage, the absence or lower levels of positive social capital in the form of social networks, social cohesion, and collective efficacy may exert a negative influence on social control within the community. More specifically, informal social control mechanisms may not function to the needs of the community. At the end of these social processes, crime and delinquency may emerge due to lack of informal social control. Further research may consider these social processes for better understanding and analysis of the link between social disorganization and crime and delinquency. Using multiple indicators for the measurement of the variables in this conceptual model will also increase the overall reliability of the study and facilitate use of different statistical techniques such as structural equation model (Veysey & Messner, 1999). Finally, advances in theoretical research will present different approaches for the study of social disorganization at different units of analysis.

APPENDIX A

REGRESSION DIAGNOSTICS

Outliers and influential points were explored by following these two steps. First, the impact of outliers on the regression results was observed with leverage and Cook's D values. Second, DFBETA was used to assess the impact of each observation on the regression coefficients.

In the first model, “Antalya” was found to be the most influential case. Cook’s D value was 2.46, which was the largest value, and higher than the cut-off point (.22). Leverage value also showed that “Antalya” (.92) exceeded the cut-off value (.20) for this model. DFBETA value for population heterogeneity rate for "Antalya" (4.30) was higher than the cut-off value of .22 for all regression models.

As in the first model, in the second model, it was observed that “Antalya” had the largest value of Cook’s D (Cook’s D_i = 3.08). Leverage value for this case (.92) exceeded the cut-off value (.20) for this model. Similarly, DFBETA for population heterogeneity rate for "Antalya" (6.52) was higher than the cut-off value of .22.

In the final model, again, Antalya was flagged as the most outlying case with the largest Cook’s D value (Cook’s Di = 3.08), which also exceeded the cutoff value of .05. Additionally, Antalya had also highest Leverage value (.92), which was also higher than cut-off value for this model (.25). DFBETA for population heterogeneity rate for "Antalya" was about 5.31, which was larger than the cut-off point (.22). Inclusion of "Antalya" would also increase regression coefficients by 5.31 standard error points when compared to a model omitting "Antalya". This evidence also supported that the observation for "Antalya" is very problematic.

As a result of outlier and influential case diagnostics for three regression models in the study, Antalya was found to be a very problematic case. Two regression models were

run with it and without it. The regression coefficients were very different in two regression models. Therefore, the case “Antalya” was removed from the sample size before the analyses.

Regression Results with the case Antalya

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.909[a]	.827	.805	1.15529

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, FaithbasedEngagementRate, UrbanizationRate, ResidentialMobilityRate, FamilyDisruptionRate, SEDI_DevelopedProvince b. Dependent Variable: PropertyCrimeRate

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	452.281	9	50.253	37.652	.000[a]
	Residual	94.763	71	1.335		
	Total	547.043	80			

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, FaithbasedEngagementRate, UrbanizationRate, ResidentialMobilityRate, FamilyDisruptionRate, SEDI_DevelopedProvince

b. Dependent Variable: PropertyCrimeRate

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.883	2.461		3.203	.002
FamilyDisruptionRate	1.072	.313	.253	3.431	.001
FaithbasedEngagementRate	-.449	.197	-.166	-2.283	.025
PopulationHeterogeneityRate	1.269	.174	.393	7.308	.000
PoliticalParticipationRate	-.072	.027	-.177	-2.693	.009

ResidentialMobilityRate	-4.108	4.467	-.067	-.920	.361
SEDI_DevelopedProvince	.817	.414	.154	1.972	.053
UrbanizationRate	.041	.015	.187	2.739	.008
YoungMalesPercentage	-.132	.091	-.112	-1.446	.153
SES	.293	.087	.292	3.376	.001

a. Dependent Variable: PropertyCrimeRate

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.0402	14.7249	3.2954	2.37771	81
Std. Predicted Value	-1.403	4.807	.000	1.000	81
Standard Error of Predicted Value	.210	1.116	.381	.142	81
Adjusted Predicted Value	-1.0093	10.4332	3.2114	2.16356	81
Residual	-2.30364	3.40479	.00000	1.08836	81
Std. Residual	-1.994	2.947	.000	.942	81
Stud. Residual	-2.463	3.081	.016	1.024	81
Deleted Residual	-3.51450	6.64184	.08401	1.46419	81
Stud. Deleted Residual	-2.557	3.286	.020	1.046	81
Mahal. Distance	1.649	73.634	8.889	9.902	81
Cook's Distance	.000	3.083	.056	.343	81
Centered Leverage Value	.021	.920	.111	.124	81

a. Dependent Variable: PropertyCrimeRate

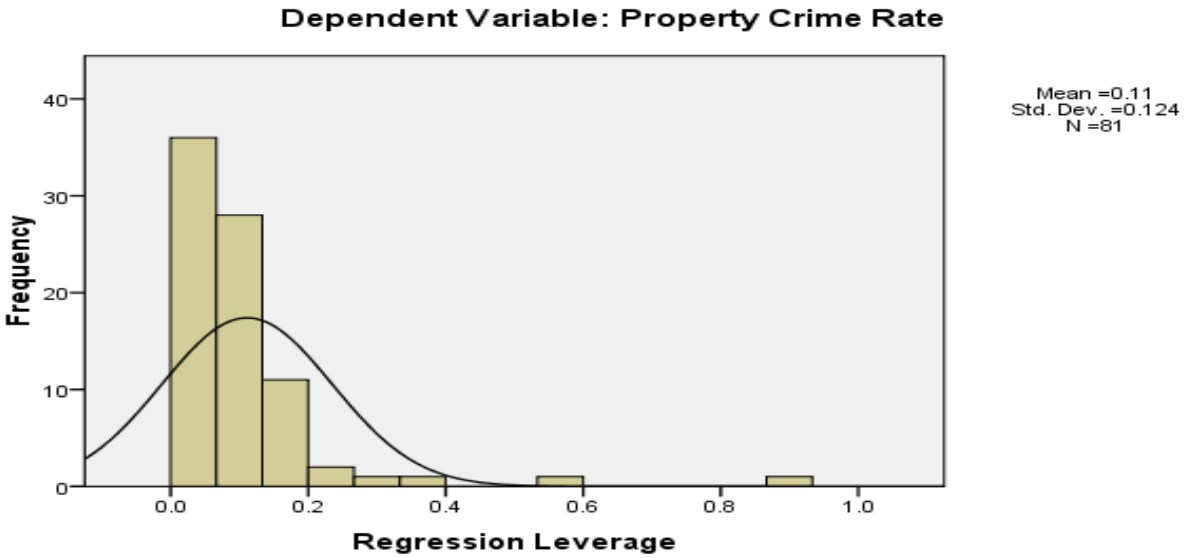
Outlier Statistics[a]

		Case Number	City	Statistic	Sig. F
Stud. Deleted Residual	1	25	DENIZLI	3.286	
	2	52	KOCAELI	2.904	
	3	58	MERSIN	2.651	
	4	7	ANKARA	-2.557	
	5	73	TEKIRDAG	-1.957	
	6	47	KAYSERI	1.896	
	7	49	KIRIKKALE	-1.754	

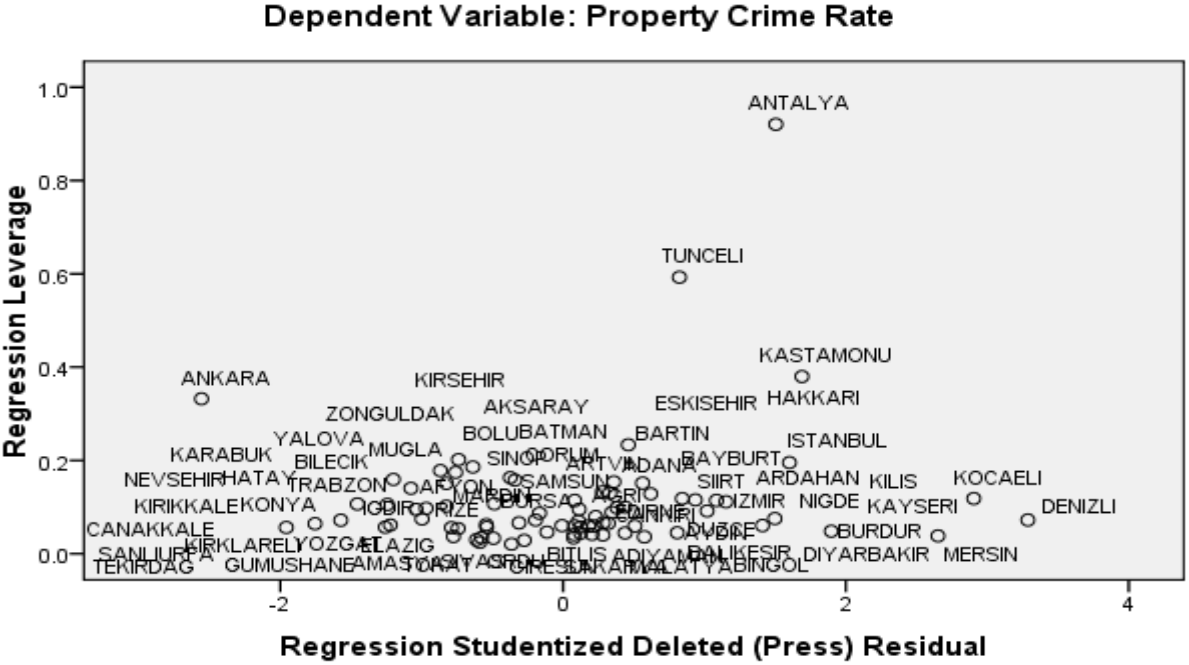
	8	46	KASTAMONU	1.689	
	9	40	ISTANBUL	1.600	
	10	53	KONYA	-1.572	
Cook's Distance	**1**	**8**	**ANTALYA**	**3.083**	**.003**
	2	7	ANKARA	.319	.974
	3	46	KASTAMONU	.179	.997
	4	52	KOCAELI	.115	1.000
	5	76	TUNCELI	.104	1.000
	6	25	DENIZLI	.088	1.000
	7	40	ISTANBUL	.066	1.000
	8	58	MERSIN	.035	1.000
	9	43	KARABUK	.030	1.000
	10	37	HATAY	.028	1.000
Centered Leverage Value	**1**	**8**	**ANTALYA**	**.920**	
	2	76	TUNCELI	.593	
	3	46	KASTAMONU	.380	
	4	7	ANKARA	.332	
	5	36	HAKKARI	.234	
	6	51	KIRSEHIR	.202	
	7	40	ISTANBUL	.195	
	8	19	BOLU	.186	
	9	81	ZONGULDA	.178	
	10	79	YALOVA	.174	

a. Dependent Variable: PropertyCrimeRate

Histogram



Scatterplot



Regression Results without the case Antalya

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.773	.744	1.14516

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, FaithbasedEngagementRate, UrbanizationRate, ResidentialMobilityRate, FamilyDisruptionRate, SEDI_DevelopedProvince b. Dependent Variable: PropertyCrimeRate

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	312.445	9	34.716	26.473	.000[a]
	Residual	91.797	70	1.311		
	Total	404.242	79			

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, FaithbasedEngagementRate, UrbanizationRate, ResidentialMobilityRate, FamilyDisruptionRate, SEDI_DevelopedProvince b. Dependent Variable: PropertyCrimeRate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.584	2.484		3.456	.001
	FamilyDisruptionRate	1.114	.311	.304	3.581	.001
	FaithbasedEngagementRate	-.505	.199	-.216	-2.544	.013
	PopulationHeterogeneityRate	.354	.633	.037	.559	.578
	PoliticalParticipationRate	-.076	.027	-.217	-2.848	.006
	ResidentialMobilityRate	-3.599	4.441	-.068	-.811	.420
	SEDI_DevelopedProvince	.824	.411	.180	2.005	.049
	UrbanizationRate	.036	.015	.192	2.385	.020
	YoungMalesPercentage	-.136	.090	-.134	-1.504	.137
	SES	.323	.088	.370	3.660	.000

a. Dependent Variable: PropertyCrimeRate

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-.2059	9.4241	3.1470	1.98872	80
Std. Predicted Value	-1.686	3.156	.000	1.000	80
Standard Error of Predicted Value	.213	.903	.384	.128	80
Adjusted Predicted Value	-1.3246	10.8227	3.1425	2.07197	80
Residual	-2.50540	3.31987	.00000	1.07795	80
Std. Residual	-2.188	2.899	.000	.941	80
Stud. Residual	-2.731	3.034	.001	1.018	80
Deleted Residual	-3.90405	3.63701	.00445	1.27196	80
Stud. Deleted Residual	-2.869	3.233	.005	1.041	80
Mahal. Distance	1.746	48.174	8.887	7.610	80
Cook's Distance	.000	.416	.020	.055	80
Centered Leverage Value	.022	.610	.112	.096	80

a. Dependent Variable: PropertyCrimeRate

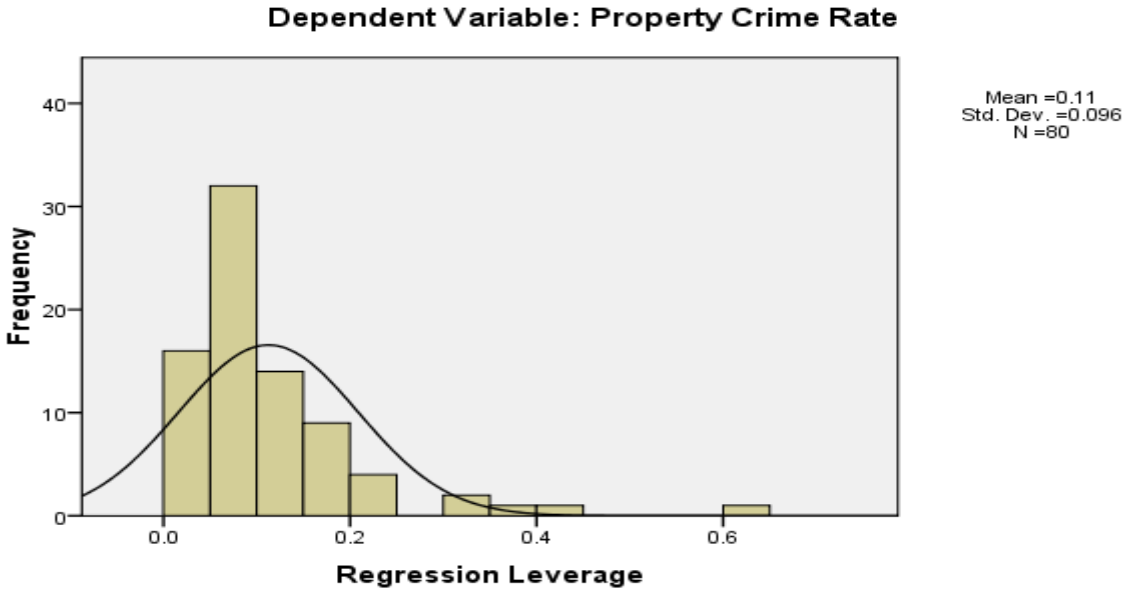
Outlier Statistics[a]

		Case Number	City	Statistic	Sig. F
Stud. Deleted Residual	1	24	DENIZLI	3.233	
	2	7	ANKARA DE	-2.869	
	3	51	KOCAELI AN	2.818	
	4	57	MERSIN KO	2.503	
	5	45	KASTAMONME	1.918	
	6	48	KIRIKKALKA	-1.874	
	7	46	KAYSERI KI	1.837	
	8	39	ISTANBULKA	1.744	
	9	72	TEKIRDAGIS	-1.717	
	10	36	HATAY TE	-1.645	
Cook's Distance	1	7	ANKARA	.416	.934
	2	45	KASTAMONAN	.238	.991
	3	51	KOCAELI KA	.113	1.000
	4	24	DENIZLI KO	.088	1.000

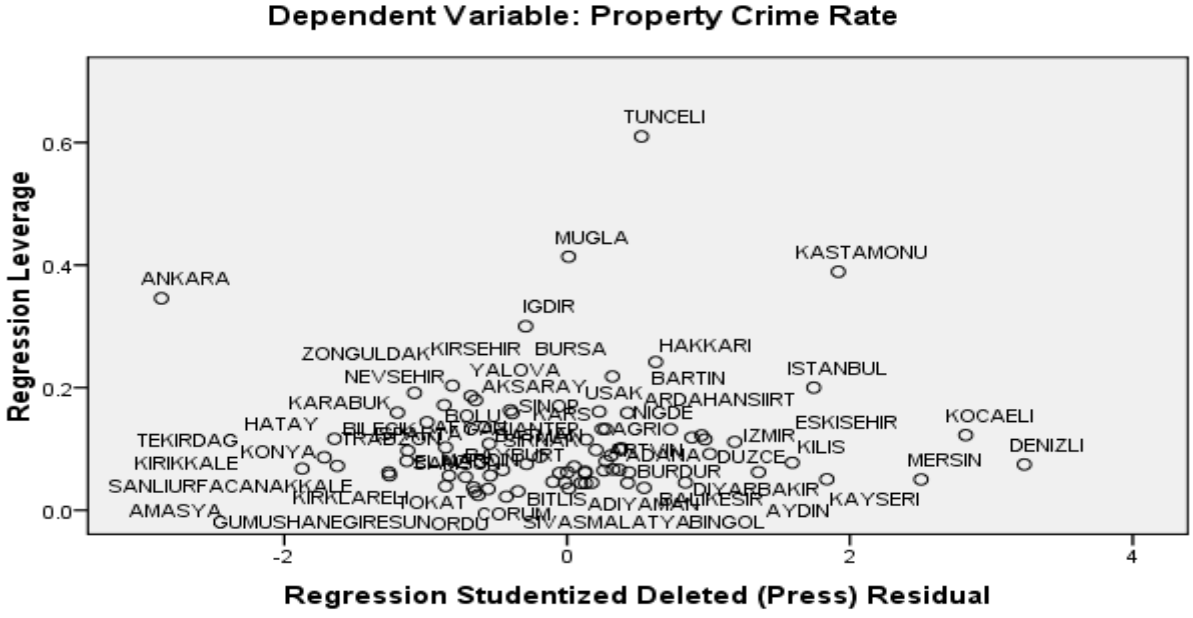
	5	39	ISTANBULDE	.080	1.000
	6	75	TUNCELI IS	.046	1.000
	7	36	HATAY TU	.039	1.000
	8	57	MERSIN HA	.039	1.000
	9	72	TEKIRDAGME	.031	1.000
	10	80	ZONGULDATE	.030	1.000
Centered Leverage Value	1	75	TUNCELI	.610	
	2	58	MUGLA TU	.414	
	3	45	KASTAMONMU	.389	
	4	7	ANKARA KA	.346	
	5	37	IGDIR AN	.300	
	6	35	HAKKARI IG	.242	
	7	20	BURSA HA	.218	
	8	50	KIRSEHIRBU	.203	
	9	39	ISTANBULKI	.200	
	10	80	ZONGULDAIS	.191	

a. Dependent Variable: PropertyCrimeRate

Histogram



Scatterplot



APPENDIX B

DIAGNOSES OF LINEARITY, NORMALITY AND HOMOSCEDASTICITY

Model 1 Political Participation Rate

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.641[a]	.411	.354	5.20215

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeteroge ResidentialMobilityRate, FamilyDisruptionRate, UrbanizationRate, SEDI_DevelopedProvince b. Dependent Variable: PoliticalParticipationRate

ANOVA[b]

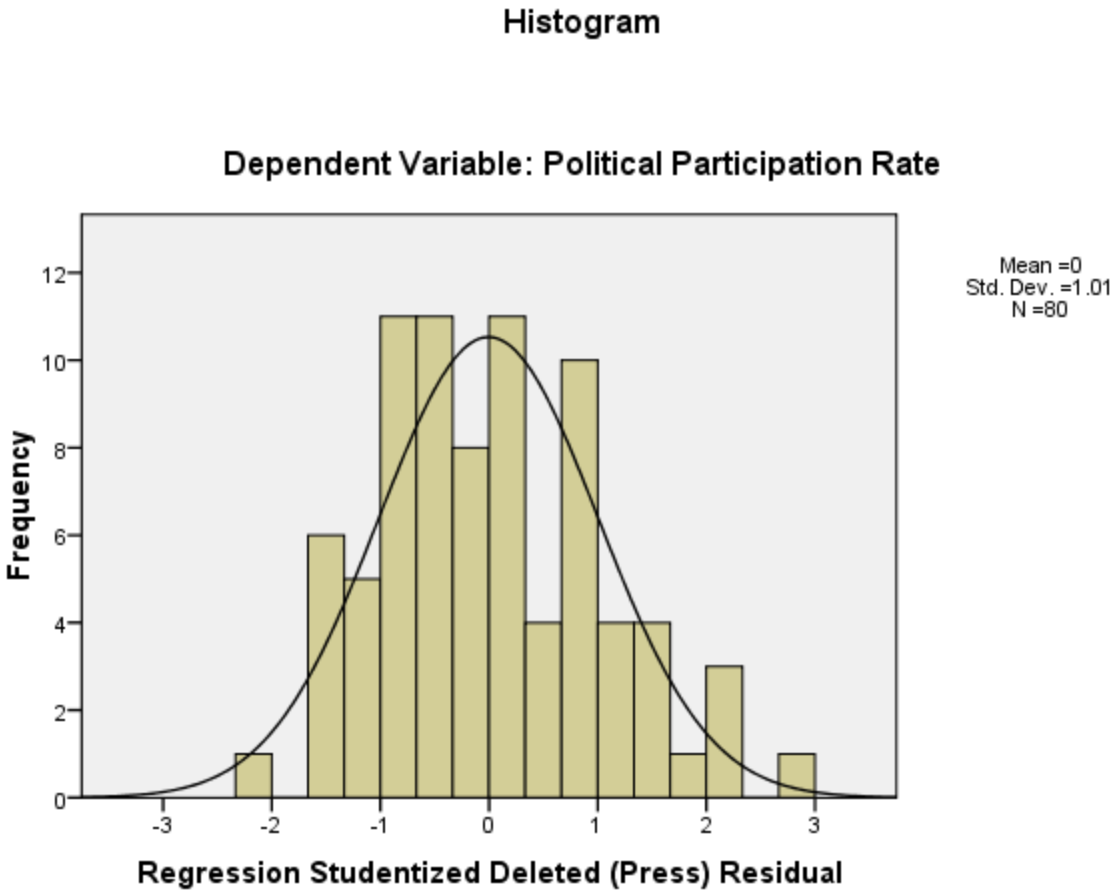
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1360.289	7	194.327	7.181	.000[a]
	Residual	1948.491	72	27.062		
	Total	3308.779	79			

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, ResidentialMobilityRate, FamilyDisruptionRate, UrbanizationRate, SEDI_DevelopedProvince b. Dependent Variable: PoliticalParticipationRate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	78.209	5.990		13.056	.000		
	FamilyDisruptionRate	5.224	1.232	.499	4.240	.000	.591	1.692
	PopulationHeterogeneityRate	-4.756	2.765	-.173	-1.720	.090	.813	1.230
	ResidentialMobilityRate	-18.179	16.794	-.120	-1.082	.283	.661	1.513
	SEDI_DevelopedProvince	3.174	1.782	.242	1.781	.079	.444	2.254
	SES	.176	.400	.071	.441	.661	.320	3.127
	UrbanizationRate	-.138	.066	-.256	-2.088	.040	.543	1.840
	YoungMalesPercentage	.036	.329	.013	.110	.913	.630	1.587

a. Dependent Variable: PoliticalParticipationRate

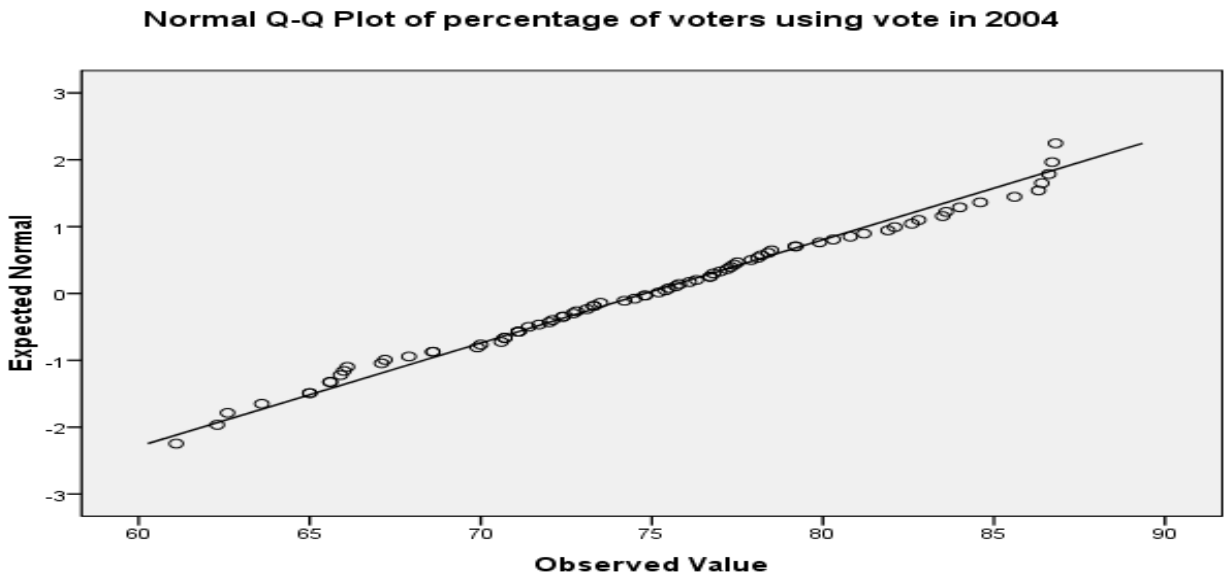


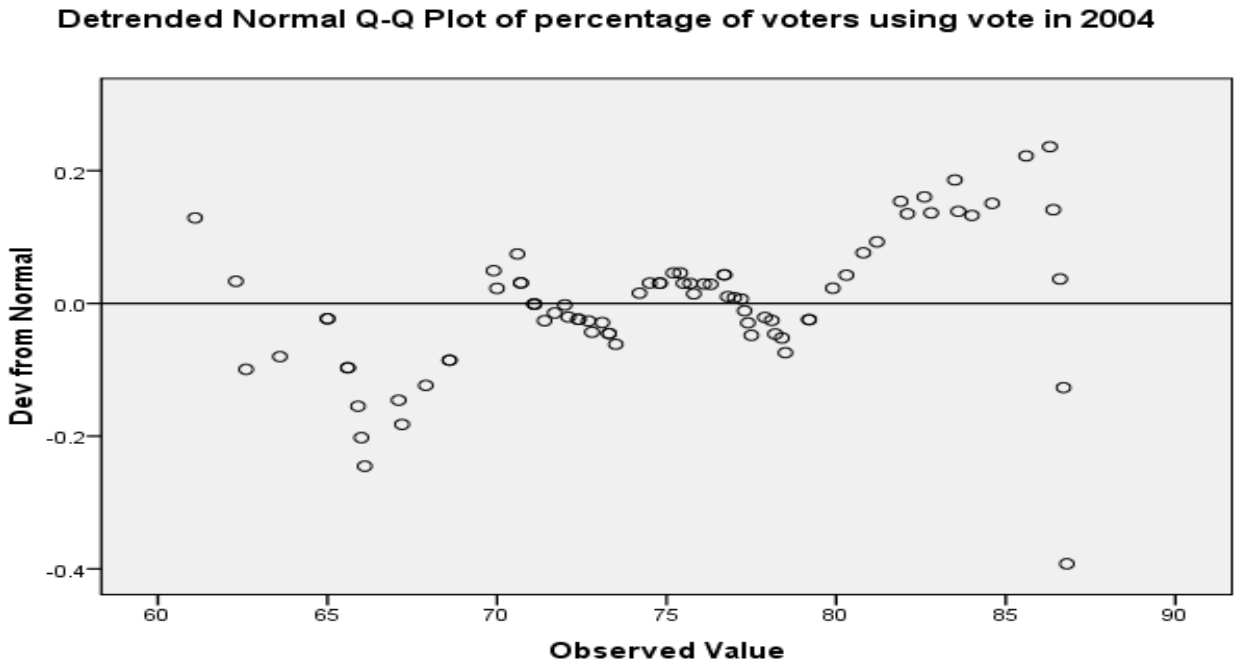
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PoliticalParticipationRate	.048	80	.200*	.981	80	.297

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.


Normal Q-Q Plot of percentage of voters using vote in 2004
Expected Normal
3
2
1
0
-1
-2
-3
60
65
70
75
80
85
90
Observed Value


Detrended Normal Q-Q Plot of percentage of voters using vote in 2004
Dev from Normal
0.2
0.0
-0.2
-0.4
60
65
70
75
80
85
90
Observed Value

Model 2 Faith-based Engagement Rate

Before Log-Transformation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.726[a]	.527	.481	.69725

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, ResidentialMobilityRate, FamilyDisruptionRate, UrbanizationRate, SEDI_DevelopedProvince

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.949	7	5.564	11.445	.000[a]
	Residual	35.004	72	.486		
	Total	73.953	79			

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, ResidentialMobilityRate, FamilyDisruptionRate, UrbanizationRate, SEDI_DevelopedProvince

b. Dependent Variable: FaithbasedEngagementRate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.179	.803		6.450	.000
	FamilyDisruptionRate	-.193	.165	-.123	-1.168	.247
	PopulationHeterogeneityRate	-.749	.371	-.182	-2.022	.047
	ResidentialMobilityRate	11.604	2.251	.514	5.155	.000
	SEDI_DevelopedProvince	-.355	.239	-.181	-1.487	.141
	UrbanizationRate	-.016	.009	-.193	-1.755	.084
	YoungMalesPercentage	-.269	.044	-.623	-6.100	.000
	SES	.032	.054	.087	.606	.547

a. Dependent Variable: FaithbasedEngagementRate

After Log-Transformation

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767[a]	.589	.549	.14996

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, ResidentialMobilityRate, FamilyDisruptionRate, UrbanizationRate, SEDI_DevelopedProvince

b. Dependent Variable: FaithBasedEngagementRate_LG

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.318	7	.331	14.725	.000[a]
	Residual	1.619	72	.022		
	Total	3.937	79			

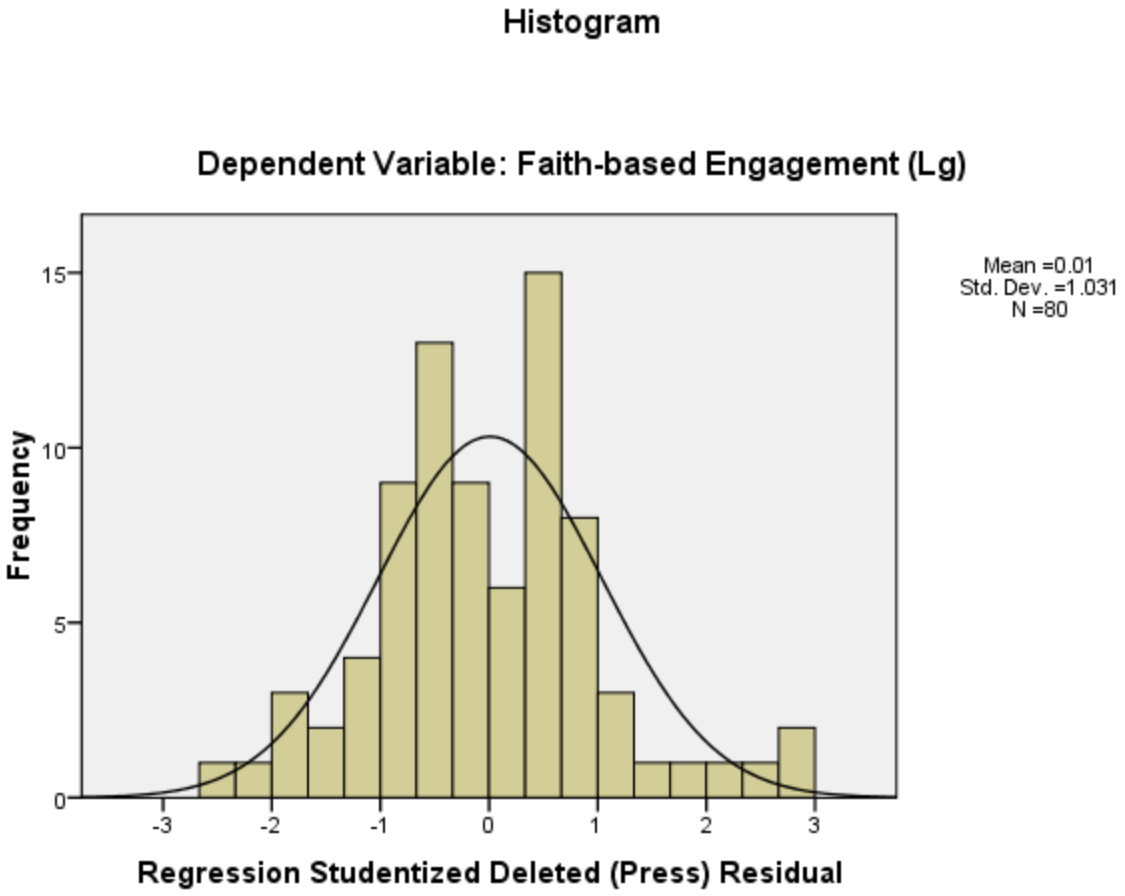
a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, ResidentialMobilityRate, FamilyDisruptionRate, UrbanizationRate, SEDI_DevelopedProvince

b. Dependent Variable: FaithBasedEngagementRate_LG

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.942	.173		5.457	.000		
	FamilyDisruptionRate	-.030	.036	-.083	-.847	.400	.591	1.692
	PopulationHeterogeneityRate	-.191	.080	-.201	-2.398	.019	.813	1.230
	ResidentialMobilityRate	2.299	.484	.442	4.750	.000	.661	1.513
	SEDI_DevelopedProvince	-.059	.051	-.131	-1.155	.252	.444	2.254
	SES	-.007	.012	-.087	-.648	.519	.320	3.127
	UrbanizationRate	-.006	.002	-.306	-2.983	.004	.543	1.840
	YoungMalesPercentage	-.050	.009	-.500	-5.255	.000	.630	1.587

a. Dependent Variable: FaithBasedEngagementRate_LG

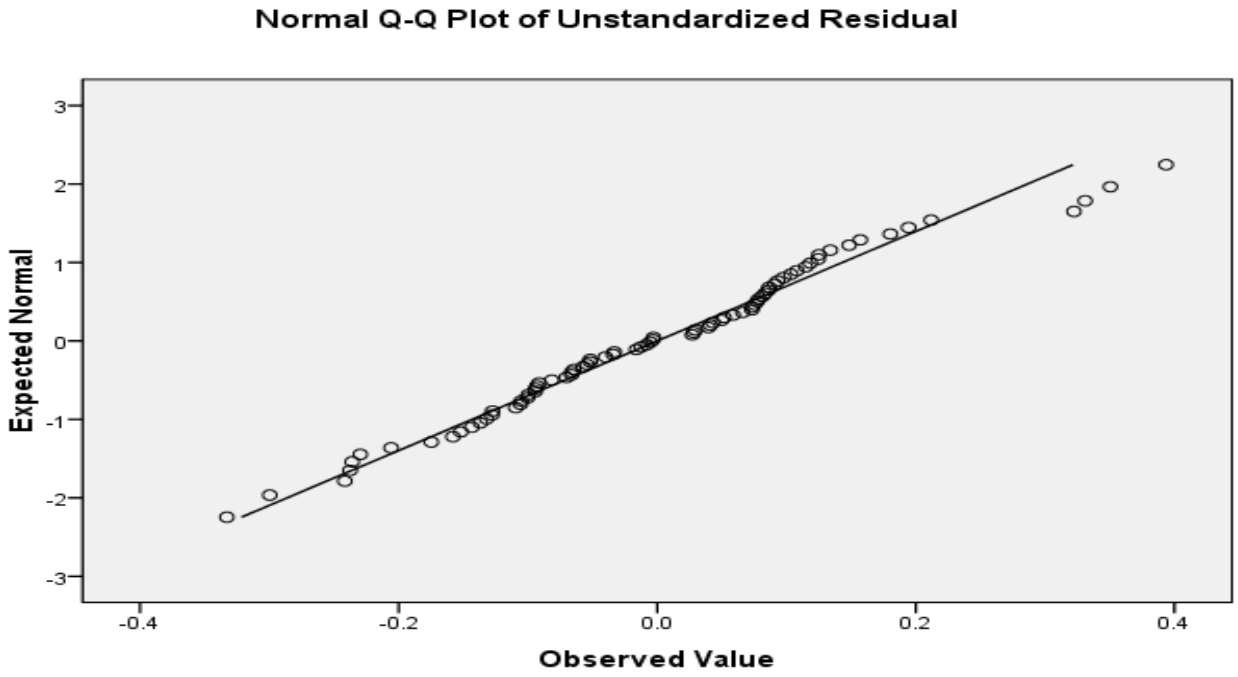


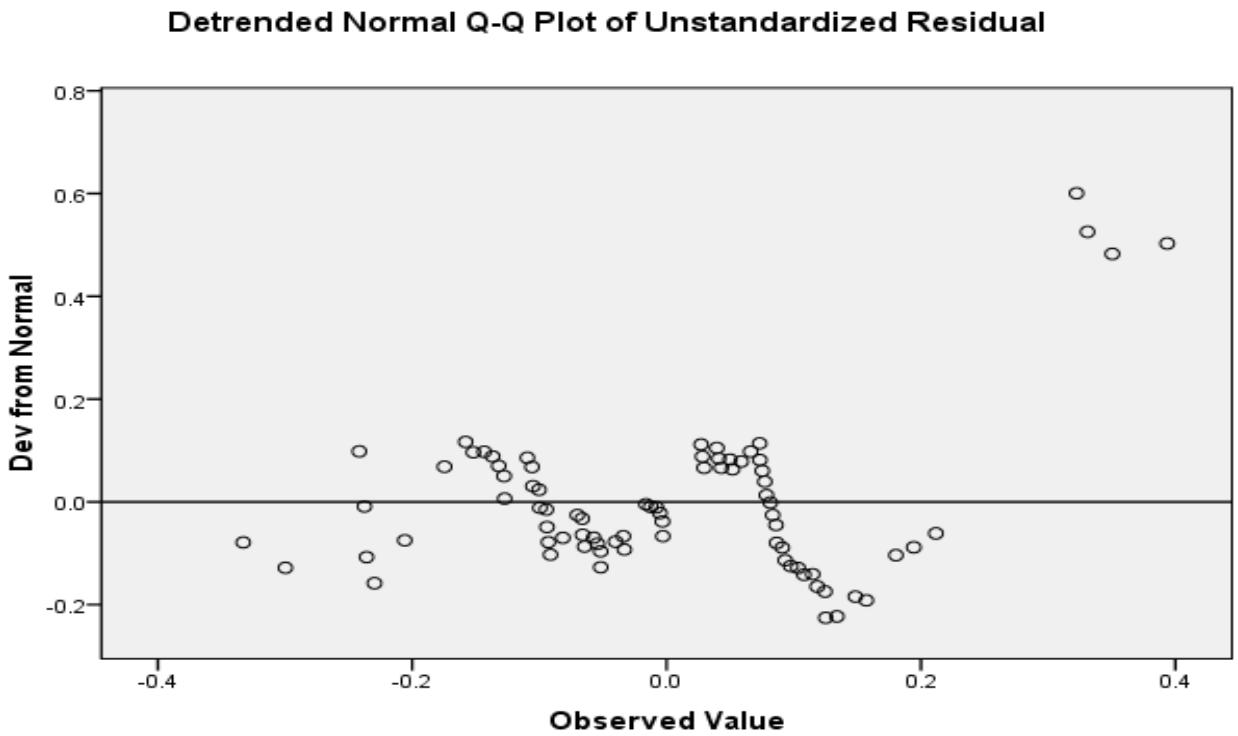
Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
FaithbasedEngagementRate resid	.066	80	.200*	.981	80	.269

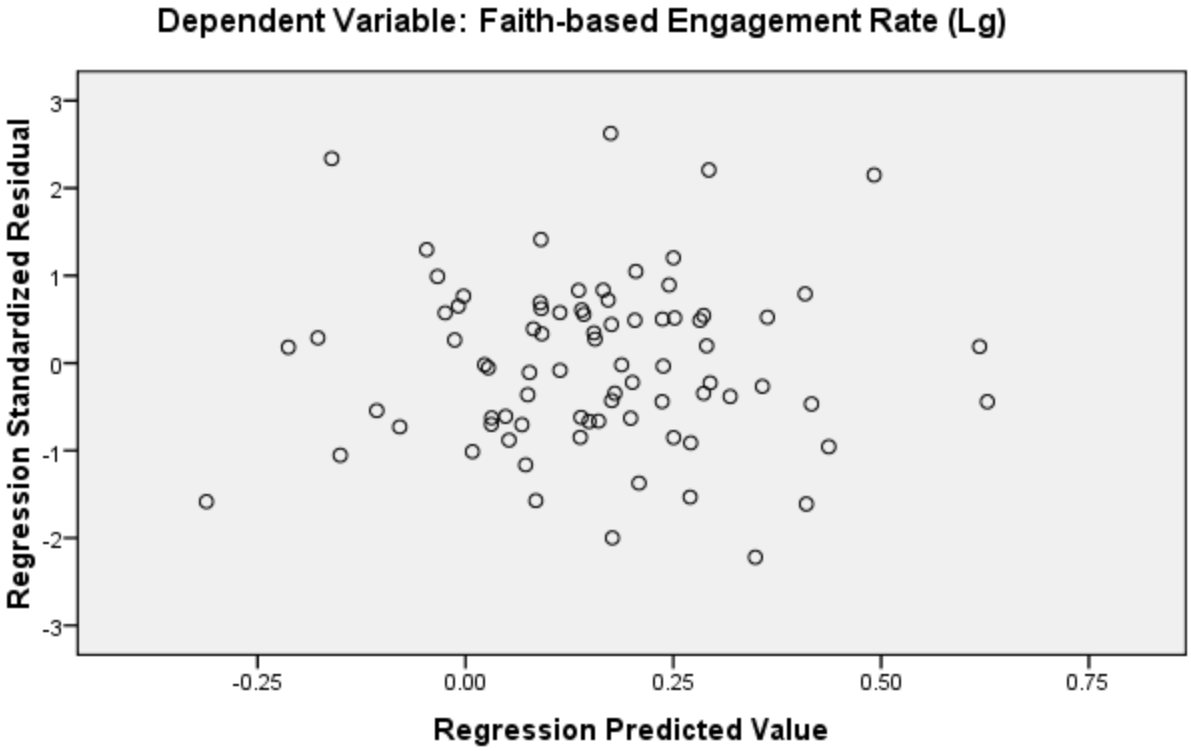
a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.


Normal Q-Q Plot of Unstandardized Residual
Expected Normal
3
2
1
0
-1
-2
-3
-0.4
-0.2
0.0
0.2
0.4
Observed Value


Detrended Normal Q-Q Plot of Unstandardized Residual
Dev from Normal
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.2
0.0
0.2
0.4
Observed Value

Scatterplot



Model 3 Property Crime Rate

Before Log-Transformation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.773	.744	1.14516

a. Predictors: (Constant), SES, YoungMalesPercentage, Population
HeterogeneityRate, PoliticalParticipationRate, FaithbasedEngagementRate, UrbanizationF
ResidentialMobilityRate, FamilyDisruptionRate, SEDI_DevelopedProvince

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	312.445	9	34.716	26.473	.000[a]
	Residual	91.797	70	1.311		
	Total	404.242	79			

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, FaithbasedEngagementRate, UrbanizationRate, ResidentialMobilityRate, FamilyDisruptionRate, SEDI_DevelopedProvince b. Dependent Variable: PropertyCrimeRate

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.584	2.484		3.456	.001
	FamilyDisruptionRate	1.114	.311	.304	3.581	.001
	FaithbasedEngagementRate	-.505	.199	-.216	-2.544	.013
	PopulationHeterogeneityRate	.354	.633	.037	.559	.578
	PoliticalParticipationRate	-.076	.027	-.217	-2.848	.006
	ResidentialMobilityRate	-3.599	4.441	-.068	-.811	.420
	SEDI_DevelopedProvince	.824	.411	.180	2.005	.049
	UrbanizationRate	.036	.015	.192	2.385	.020
	YoungMalesPercentage	-.136	.090	-.134	-1.504	.137
	SES	.323	.088	.370	3.660	.000

a. Dependent Variable: PropertyCrimeRate

After Log-Transformation

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854[a]	.729	.694	.16722

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, ResidentialMobilityRate, UrbanizationRate, FamilyDisruptionRate, SEDI_DevelopedProvince, FaithBasedEngagementRate_LG b. Dependent Variable: PropertyCrimeRate_LG

ANOVA[b]

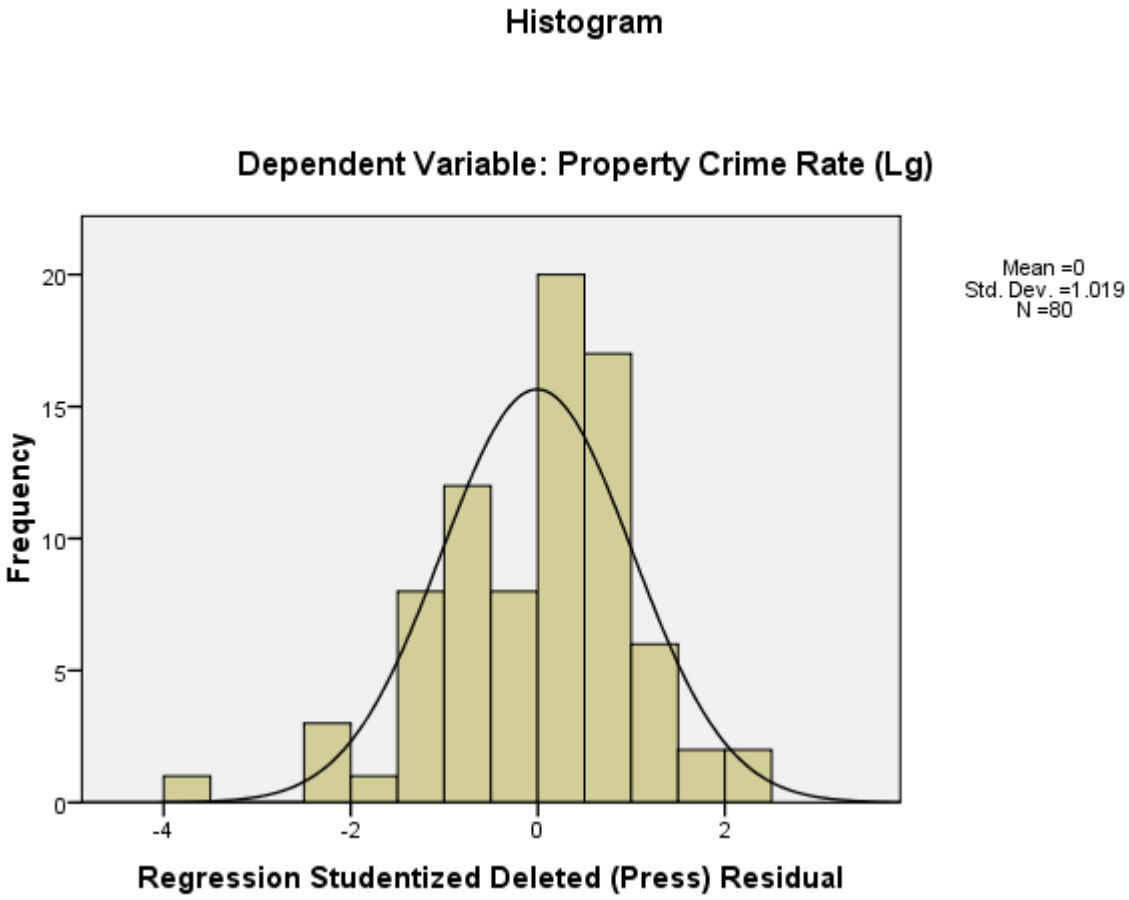
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.256	9	.584	20.887	.000[a]
	Residual	1.957	70	.028		
	Total	7.214	79			

a. Predictors: (Constant), SES, YoungMalesPercentage, PopulationHeterogeneityRate, PoliticalParticipationRate, ResidentialMobilityRate, UrbanizationRate, FamilyDisruptionRate, SEDI_DevelopedProvince, FaithBasedEngagementRate_LG b. Dependent Variable: PropertyCrimeRate_LG

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.764	.355		2.154	.035		
FaithBasedEngagementRate_LG	-.259	.138	-.191	-1.867	.066	.371	2.699
FamilyDisruptionRate	.165	.046	.337	3.617	.001	.447	2.238
PoliticalParticipationRate	-.007	.004	-.148	-1.727	.089	.531	1.885
PopulationHeterogeneityRate	.068	.093	.053	.733	.466	.743	1.345
ResidentialMobilityRate	-.356	.642	-.050	-.554	.582	.467	2.142
SEDI_DevelopedProvince	.131	.060	.214	2.192	.032	.407	2.455
SES	.029	.013	.245	2.213	.030	.316	3.166
UrbanizationRate	.005	.002	.182	2.010	.048	.475	2.105
YoungMalesPercentage	-.017	.013	-.129	-1.373	.174	.440	2.272

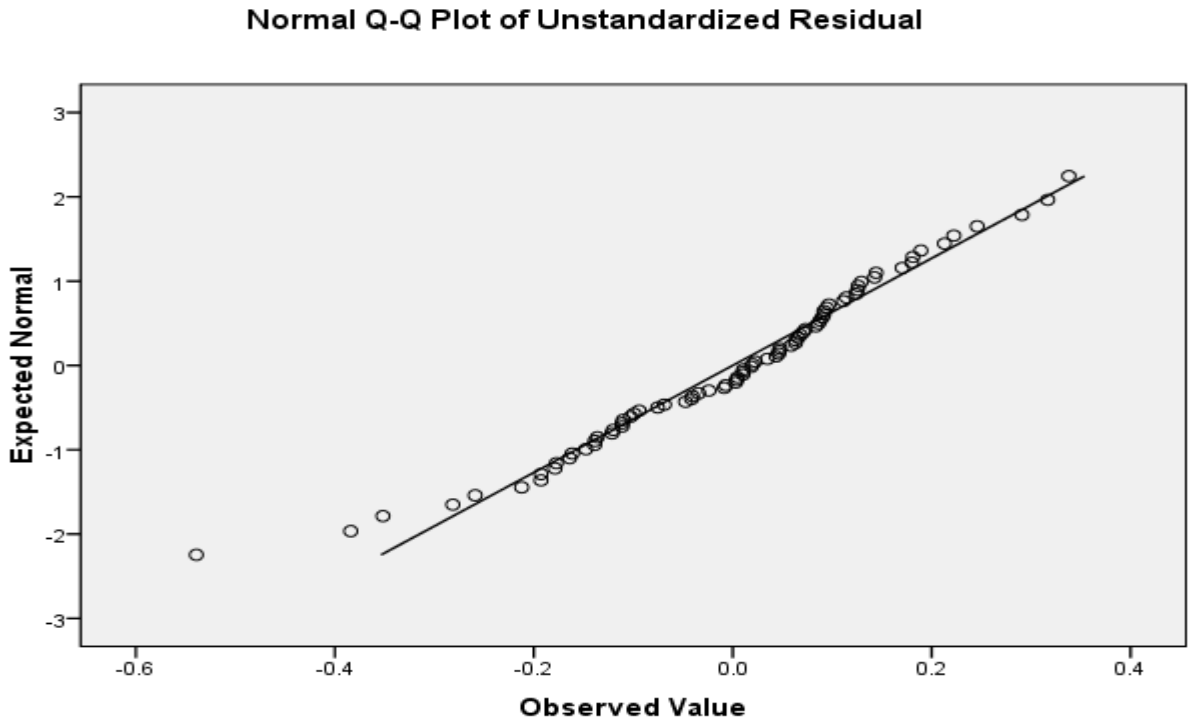
. Dependent Variable: PropertyCrimeRate_LG

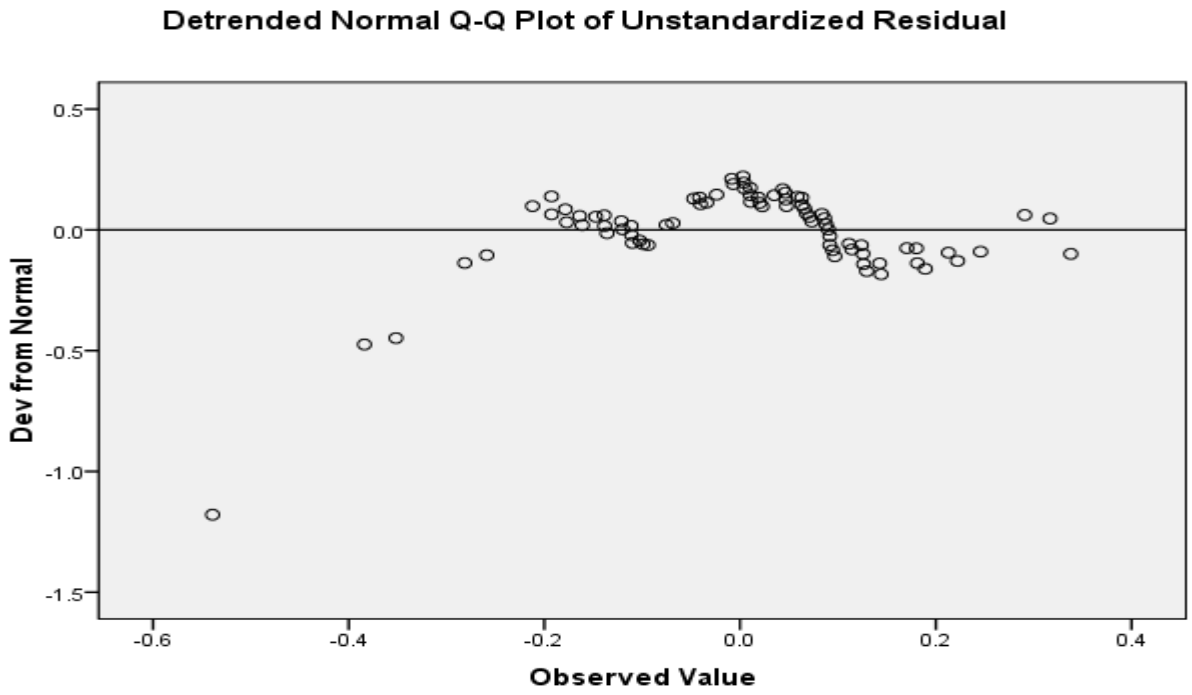


Tests of Normality

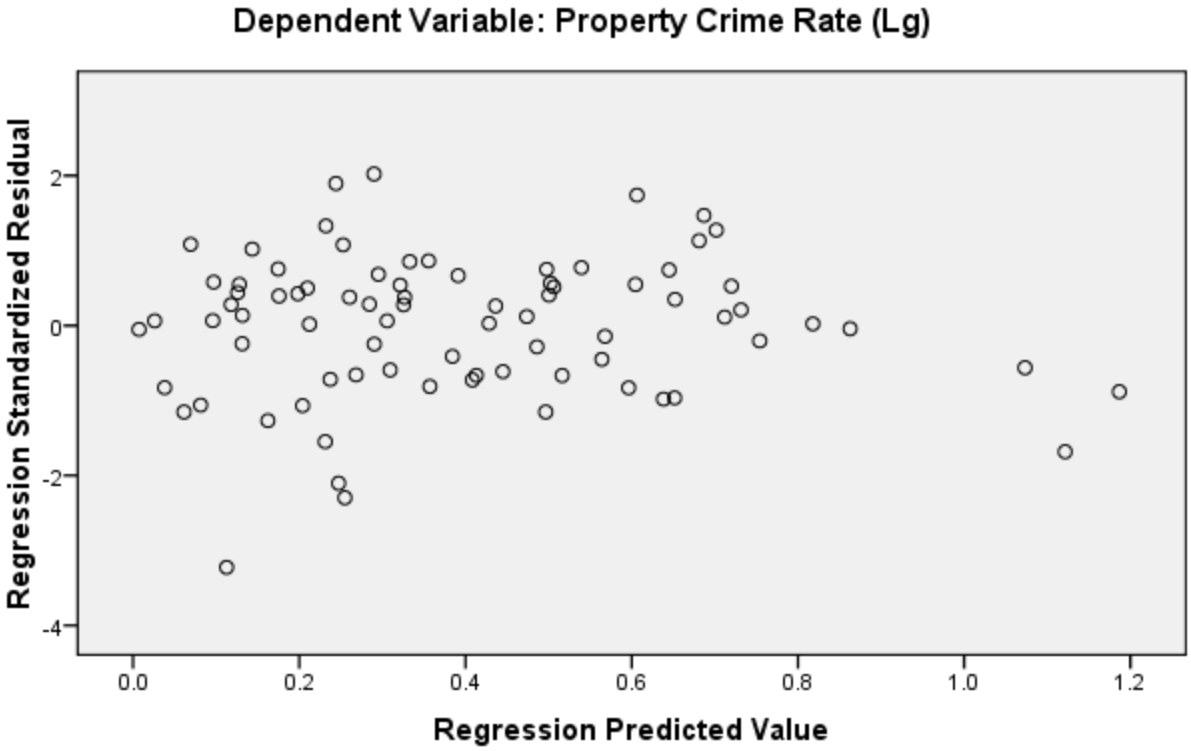
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PropertyCrimeRateResid	.095	80	.072	.973	80	.093

a. Lilliefors Significance Correction


Normal Q-Q Plot of Unstandardized Residual
Expected Normal
3
2
1
0
-1
-2
-3
-0.6
-0.4
-0.2
0.0
0.2
0.4
Observed Value


Detrended Normal Q-Q Plot of Unstandardized Residual
Dev from Normal
0.5
0.0
-0.5
-1.0
-1.5
-0.6
-0.4
-0.2
0.0
0.2
0.4
Observed Value

Scatterplot



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